AKAI

MODEL VS-75EOG
MODEL VS-A77EOG

SCHEMATIC DIAGRAM
AND PC BOARDS

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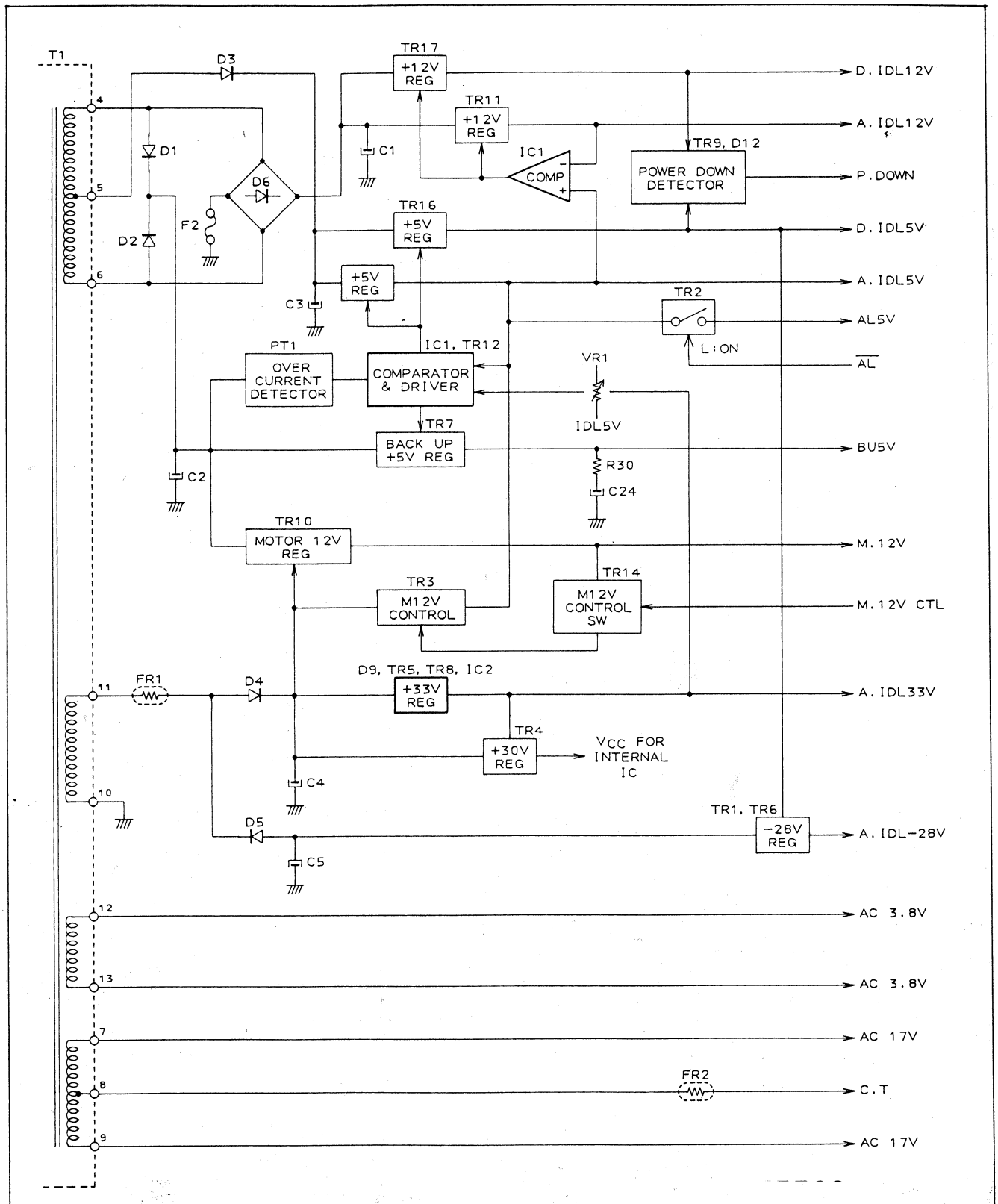


POWER SUPPLY
BLOCK DIAGRAM
NO.5-1 V108614F

MECHA BLOCK

SERVO/
SYSTEM CONTROL
PCB

MODE SELECTOR ENCODE DATA

P23 PIN NO.	POWER ON	ST	PLAY	F.F RWD	RWD SERCH	STILL	TAPE LOADING	CASSETTE LOADING
① GND	L	L	L	L	L	L	L	L
② ENC.1	L	H	L	H	H	L	H	L
③ ENC.2	H	H	L	L	L	H	H	H
④ ENC.3	L	L	H	L	H	L	H	H
⑤ ENC.4	L	L	H	L	H	H	L	L

IDL 5V
PH1
TAKE-UP REEL PULSE SENSOR
TR2 END SENSOR
TR1 START SENSOR
SW1 REC SAFETY
MODE SELECTOR
LOADING MOTOR
M 12V
IC6 BA6229
TR51 CURRENT DET
PRE
LOGIC
DRIVER
TR13 H:ON
TR50 TORQUE CONTROL
LM R
LM F
LM STOP
X1 4.194MHz
Vcc
RS.
POS (1) to POS (4)
S.S
E.S
TRP
IC1 μPD75104 CW-132 (SYS-CON CPU)
IC3 BU2753S (SERVO)
DM PLS.
DM ST.
HEADER
SPEED IN
REC DUTY
CTL DUTY
TR10 SPEED DET
SP/LP
LOAD
DATA
CLK
TRK (0) to TRK (5)
D/A
I/V
TRK-MM
C.SYNC
SWP
TR18.TR54 IC5(1/2) DM CTL
D.M
F/V
P/D
FG
PG
TR19, TR20, TR21 IC5(1/2) CM CTL
C.M
CTL
FG
FSC
FROM CHROMA PCB
STILL
CTL
FG
CM.FAST
CTL.RESET
TR1
TR12
FG/CTL AMP
TR14, TR15 IC4, BA6405
CTL HEAD
A SWP
TO PRE AMP PCB
TRICK
SLOW
CUE/REV
TRICK
HF.DISP
REC.ST
PB
EE
SP/LP
INT/EXT
SC
HF/NOR
A.MUTE
MODE1
MODE2

BU 5V
IC6 TA76
BUFF
FL1 FLD
T9 to T12
T0 to T8
S0 to S11
KEY MATRIX
K0 to K3
IC1 μPD75216A-CW (OPERATION-CPU)
IC5 S8053ALR
RESET
INT4
P.DOWN
PH501 REMOTE CONTROL AMP
INT0
REMOTE CONTROL SIGNAL INPUT
X1
X2
VSS

Vcc
AFC
PWN
MUTE
TO RF PCB
READY
A
B
S.CLK2
Y (CLK)
X (S1/S0)
TR3
IC3 BU4052 (1/0 EXPAND)
S1/S0
CLK
TO VPS PCB
S0/S1
CS
RESET
CLK
D0 to D3
A0 to A3
CLK CE IC2 CLK1008L (EEP ROM)
TR2
IC4 μPC393HA ZB1
A/D
L
R

IC503 M50455 (DISPLAY CONT)
RESET CS S0/S1 CLK
IC501 (Y.PROCESS)
C.SYNC
A.MUTE
REC ST 12V
PB 5V
EE 5V
TR519 REC ST 12V.DRIVE
TR518 P.B 5V DRIVE
TR520 EE 5V DRIVE
TR510 TR531 V.REC CURRENT ADJ
IC6 LA7296 (AUDIO AMP)
TO CHROMA PCB
IC504 V.IN SELECT

TR18, TR19 IC7 BA6138
RECTIFICATION DC AMP
LCH
RCH
IC1 HA12121NT
AUDIO I/O SELECTOR
INT/EXT
NOR/HIFI
SC
L/R/ST
IC5 AN3920 HIFI DET
TR9, 10

AUDIO OUTPUT MODE

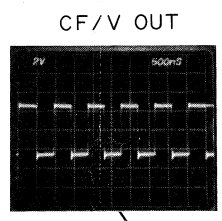
MODE 1	MODE 2	MODE
0	0	STEREO
1	1	LEFT
1	0	RIGHT

IC2 MB88505H-662
(SURROUND/TUNER CONTROL)
S1/S0
S0/S1
CLK
RESET
C.SYNC
NOR
S.ST
HALL
DOLBY
PROTECT
MUTE
DATA
STB.R
STB.F
CLK
U
VH
VL
T/V
TU, PWR
BIL
ST
TO SURROUND PCB
TO RF PCB
X2 4.194MHz

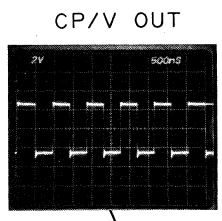
OPERATION (A) (B) (C) PCB

AUDIO/VIDEO BLOCK

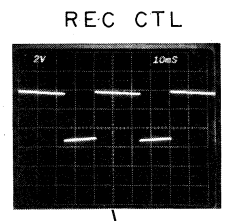
OPERATION & SYSTEM CONTROL BLOCK DIAGRAM
NO.5-2 V109952F



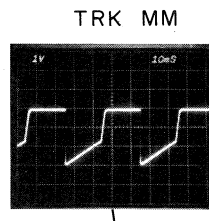
CF/V OUT



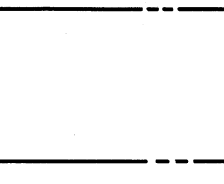
CP/V OUT



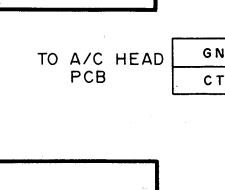
REC CTL



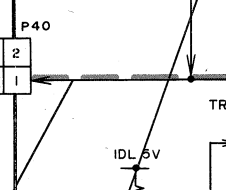
TRK MM



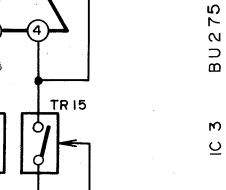
REC CTL



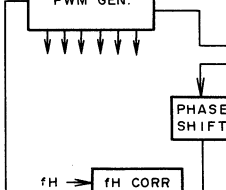
CTL



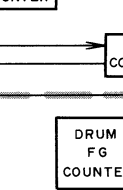
CTL AMP OUT



fsc

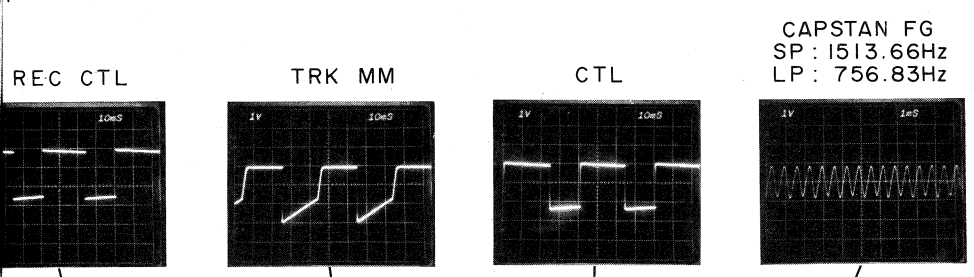


DM F/V OUT



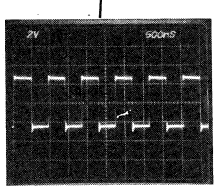
DM P/V

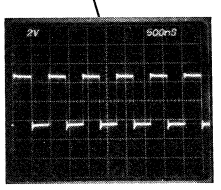
SERVO/SYSCON PCB

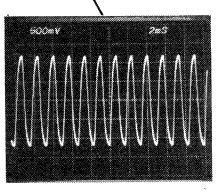


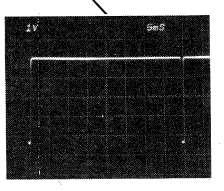
FROM IC 3 (18) → (1) HEADER
FROM IC 3 (9) → (3) SWP
FROM IC 4 (9) → (18) FG
(8) SPEED IN
SP : H
LP : L
TR11, R48, R49
I/V CONVERTOR
D/A CONVERTOR
R11
R12
R13
R14
R15
R16
TRK
IC 1
μPD75104CW-132
(23) CM FAST
(48) SP/LP
(54) REC DUTY
(55) CLK
(56) DATA
(57) LOAD
(58) CM-STOP
(60) STILL
(61) D.M STOP
(63) D.M PLS
IDL 5V
TR19
: ON
C
R
LPF
CM PHASE ERROR
IC4
IC 4
BA6405
FG AMP
FG
TR10
H:ON
CAPSTAN FG
CTL PULSE
REC DUTY
HEADER
C. SYNC FROM A/V PCB
SP/LP
V. SYNC SEP
GAIN CORR
CAP PHASE DET
REC CTL
TRACKING MM
MODE DET.
CTL DUTY DET.
REC
I/M
SER
I/N
FWD
REV
PB
NOR
fH CORR
CAP FV CONV
GAIN CORR
SP
1/2
LP
ASB
CTL DELAY
PWM GEN.
CAP REF COUNTER
PHASE SHIFT
REF COUNTER
TRIC
CH1 VP
CLOCK
CH2 VP MM
DRUM FG COUNTER
SW LOGIC
FMA F/F
RF F/F
2H DELAY
TRK
VP. COUNT
SERIAL DATA DECORDER
D. GAP SP
D. GAP LP
SW MM
fH
DRUM FV. CONV.
SAMPLE
DRUM PHASE DET
DM SPEED ERROR
DM PHASE ERROR
DM FG
DM PG
SW. P
ASW.P
VP
VR1
SWITING POINT
DI5
DI3
DI4
L:ON
TR18
M STOP IC1 (61)
TR17
VR3
SP V-Adj
TR16
VR2
LP V-Adj
TR55
SP/LP IC1 (48)

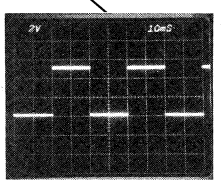
CAPSTAN MOTOR SPEED
CAPSTAN MOTOR PHASE
DRUM MOTOR SPEED
DRUM MOTOR PHASE


DM F/V OUT

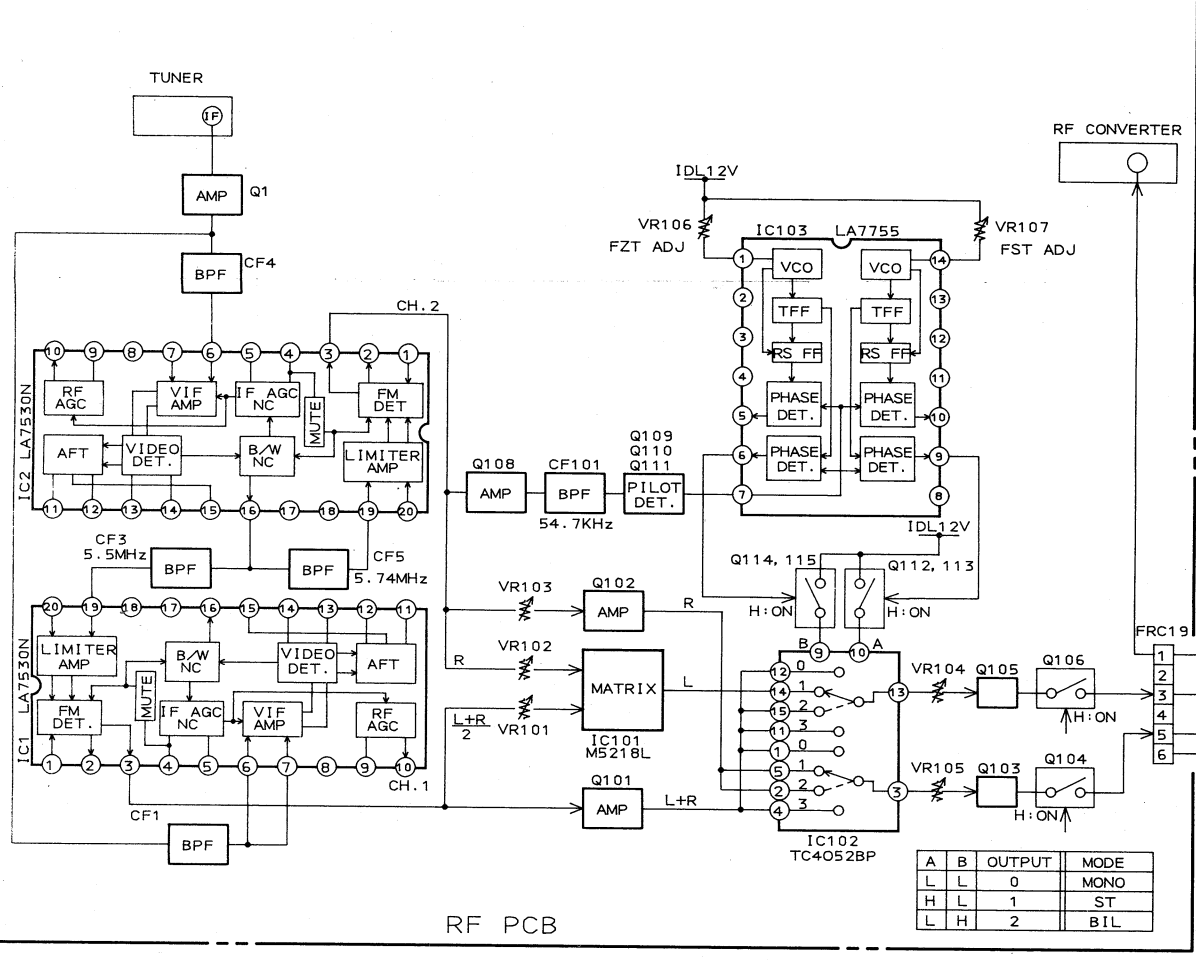

DM P/V OUT

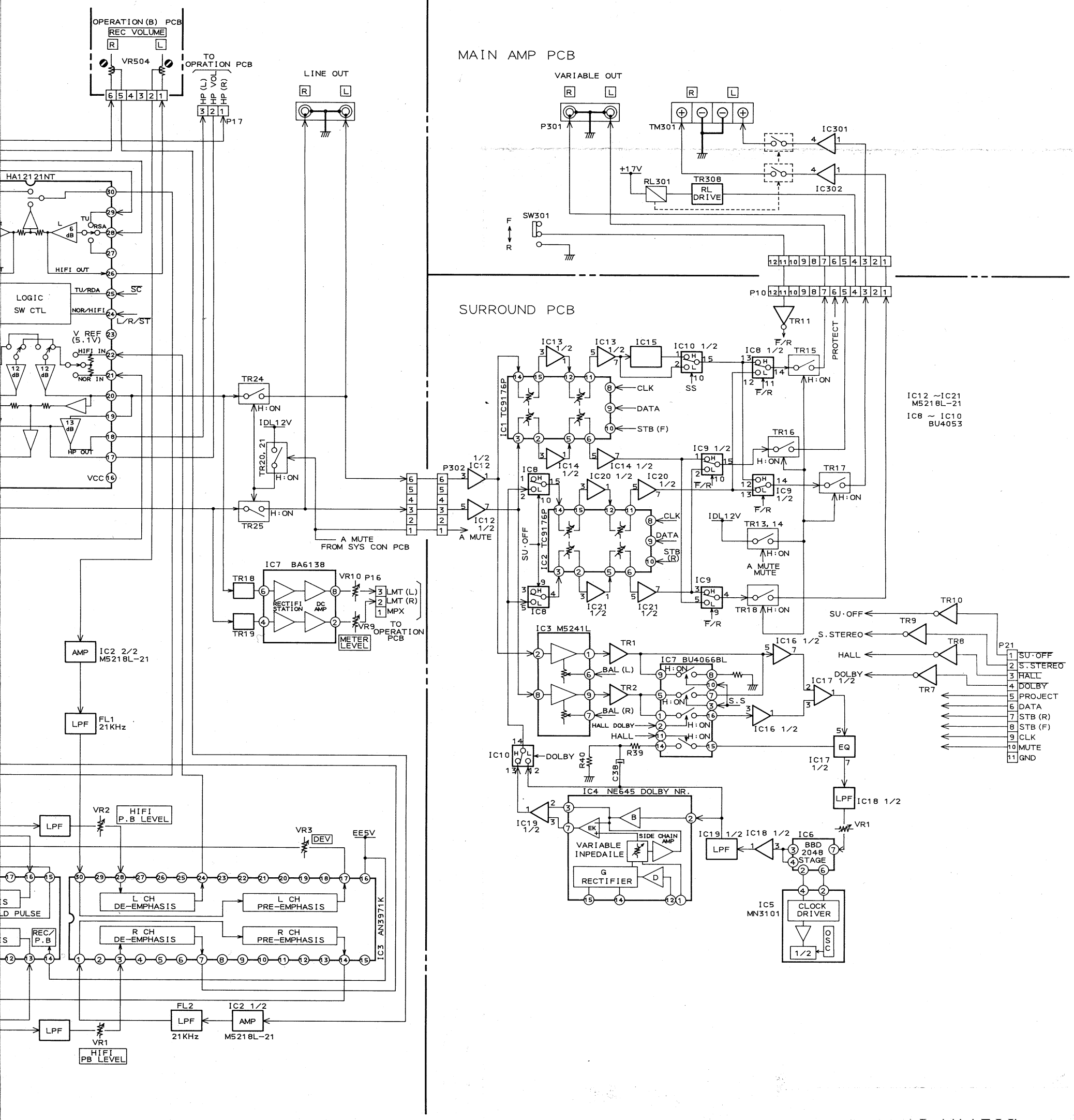

DM FG
f : 599.79Hz


DM PG


SW PULSE

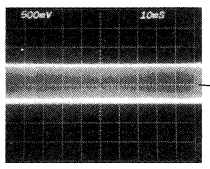
SERVO
BLOCK DIAGRAM
NO.5-3 V108616F


TUNER
IF
AMP
Q1
BPF
CF4
CH. 2
IC2 LA7530N
RF AGC
VIF AMP
IF AGC NC
MUTE
FM DET
AFT
VIDEO DET.
B/W NC
LIMITER AMP
CF3 5.5MHz
BPF
BPF
CF5 5.74MHz
IC1 LA7530N
LIMITER AMP
B/W NC
VIDEO DET.
AFT
FM DET.
MUTE
IF AGC NC
VIF AMP
RF AGC
CH. 1
CF1
BPF
Q108
AMP
CF101
BPF
54.7KHz
Q109
Q110
Q111
PILOT DET.
RF CONVERTER
IDL12V
VR106
FZT ADJ
IC103 LA7755
VR107
FST ADJ
VCO
VCO
TFF
TFF
RS FF
RS FF
PHASE DET.
PHASE DET.
PHASE DET.
PHASE DET.
IDL12V
Q114, 115
Q112, 113
H:ON
H:ON
VR103
Q102
AMP
R
VR102
MATRIX
L
L+R 2
VR101
IC101 M5218L
Q101
AMP
L+R
IC102 TC4052BP
VR104
Q105
Q106
H:ON
VR105
Q103
Q104
H:ON
FRC19
P19
A | B | OUTPUT | MODE
L | L | 0 | MONO
H | L | 1 | ST
L | H | 2 | BIL
RF PCB
OPERATION (B) PCB
REC VOLUME
R
L
VR504
TO OPERATION
HP (L) VOL
HP (R) VOL
LINE IN
R
L
IC1 HA12121NT
10 dB
TU
RSA
R
6 dB
L
6 dB
TU
RSA
HIFI OUT
HIFI OUT
EXT/INT
TU/RDA
NOR/HIFI
LOGIC SW CTL
TU/RDA
NOR/HIFI
SC
L/R/ST
V REF
V REF (5.1V)
HIFI IN
HIFI IN
NOR IN
NOR IN
12 dB
12 dB
13 dB
13 dB
HP OUT
HP OUT
GND
VCC
TR26
H:ON
A MUTE
FL6
LPF
15KHz
VR8
BIAS
REC ST. 12V
P47
FULL ERASE
SIDE ERASE
AUDIO R/P
P48
OSC
REC/EE CTL
Ripple FLT
PB/EE CTL
MUTE CTL
EP SW CTL
LP SW CTL
P ON/OFF MUTE
R ON/OFF MUTE
REC MUTE
REC AMP
LIM AMP
Current Protect
Ripple FLT
PB MUTE
ALC
ALC DET
EE MUTE
EQ AMP
LP
IC6 LA7296
VR11
P.B LEVEL
IDL5V
EE5V
VR5
F0
NOR/HIFI
TR9, 10
H:ON
TR11
H:ON
AMP
IC2 2/2 M5218L-21
LPF
FL1 21KHz
PRE AMP PCB
TR12 ~ TR16
REC AMP
VR7
REC LEVEL
A1
A2
HEAD DRUM BLK
A1
REC
A2
GND
TR4
H:ON
TR5
H:ON
IC2 μPC1531HA (PRE AMP)
CH1
CH2
TR6
H:ON
FROM POWER PCB
PB5V
PB5V
A SWP
AMP
AMP
AMP
DROP OUT DET
ENVE DETECTOR
IC5 AN3920SK
LCH MODULATOR
RCH MODULATOR
L CH PRE-ENPHASIS
R CH PRE-ENPHASIS
HOLD PULSE
IC4 AN3929K
REC/P.B
L CH DE-EMPHASIS
R CH DE-EMPHASIS
VR6
F0
IDL5V
DEV
VR4
1.4MHz
BPF
FL3
1.8MHz
BPF
FL4
LPF
VR2
HIFI P.B LEVEL
LPF
VR1
HIFI PB LEVEL
FL2
LPF
21KHz
AUDIO/VIDEO PCB

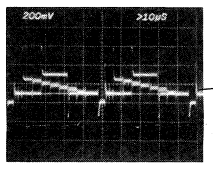


AUDIO
BLOCK DIAGRAM
NO.5-4 V108617F

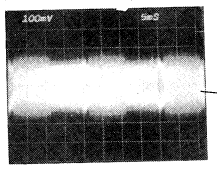
REC



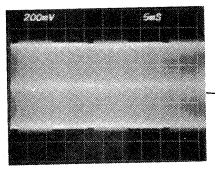
REC FM MOD OUT



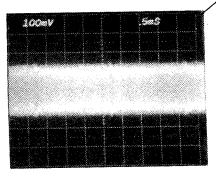
REC MAIN EMPHA OUT



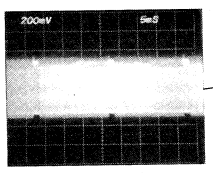
PB PREAMP OUT



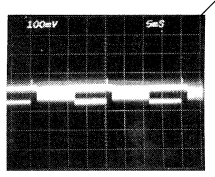
REC FM SIGNAL



PB FM IN



PB DEM OUT



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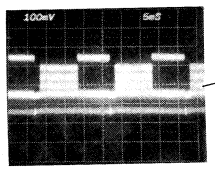

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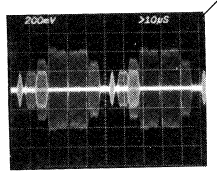
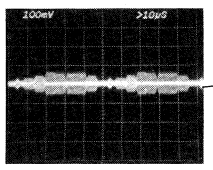
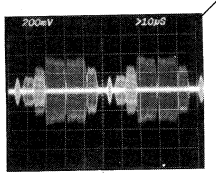


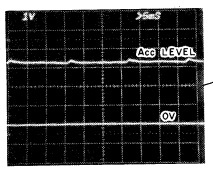
PB HIGH CHROMA OUT



PB COMB FILTER OUT



PB SW-1 IN



PB ACC DET

PB LOW CHROMA IN

REC HIGH CHROMA IN

B.G.P OUT

V.C.O

PB MIS LOCK OUT IN

C SWP

PB:XO OUT
REC:VXO OUT

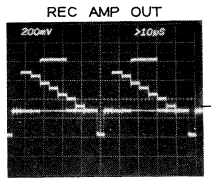
CCD 2FSC 8.867

IMS 2FSC 8.867

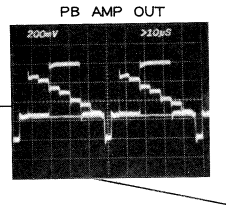
REC/PB
SUB CONV OUT

FSC B-1D DE

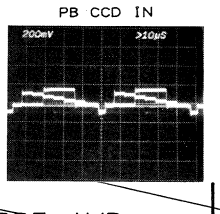
REC AMP OUT



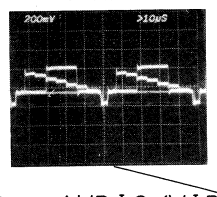
PB AMP OUT



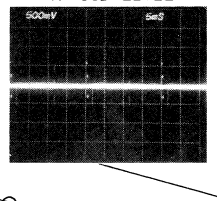
PB CCD IN



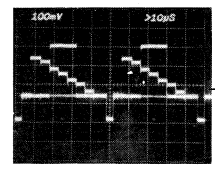
PB CCD OUT



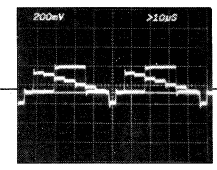
TP CCD LEVEL



REC Y



PB Y



PRE AMP PCB

AUDIO/VIDEO PCB

IC1 HA118019NT (PRE AMP)

P401

CH2 SP CH1 CH1 LP CH2

LOGIC CONT

SP/LP
CUE/REV
AFC SYNC
SWP

SP
EP

AGC

TR1, 2
HPF

P7

5	PB-LC	5
4	GND	4
3	REC-SIG	3
2	GND	2
1	PB-FM	1

TR516, 517
PEAKING AMP

P303

1	2	3	4	5	6	7	8	9
PB-LC	C-CTL	BG P	REC-C	PB-C	SP/LP	C.SYNC	GND	V-TL
1	2	3	4	5	6	7	8	9

TR513 MIX

TR512

TR514

VR509 C.REC

IDL5V

W. CLIP
D. CLIP
VR503 FREQ
VR505 VR504
DEV
VR 502
REC
TP506

VR508 VR507 SP. Y.REC
LP. Y.REC

FL502 LPF 3.3MHz

IC502 CCD

TP504 CCD

GND
ATT
EE
VV

CLIP
MEMPH
DET
LIM
CLP
AMP
LIM
MOD
NLE
NLDE
COR
DETAIL LNC

IC501 AN3231K (VIDEO Y SIGNAL PROCCESSING)

DL
LPF
EQ
HPF
LIM
EQ
DOP
MIX
ENV
LIM
DEM
AMP
EXP
EXR
V CC

TR1, 2
LPF
TR4

DL1 COMB FILTER
TR5, 6
FL1 BPF 4.43

EF TR7
LPF FL1
P.B5V
D506

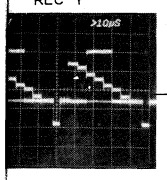
IDL 5V
Vcc

COLOR KILLER
AMP
NT MES PAL
ACC DET
ACC AMP
CARRIER BAL
SW 3
SP LP EP
LP SP SW2 REC
P/N S SW1 REC
COLOR KILLER
BURST EMPH DE-EMPH.
MAIN CONV
P/R

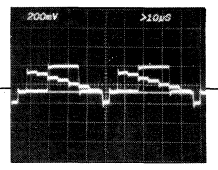
IC1 TA8632N (CHROMA SIGNAL PROCCESSING)

MISLOCK OUT
AFC MISLOCK
APC MISLOCK
PULSE GEN
COUNT DOWN
1/8
COLOR KILLER DET
AFC DET
PHASE SHIFT
VCO
B-ID LO
APC DET
SW
B-ID DET
X2
VXO/XO
SUB CONV
TR9
AMP
IDL 5V
VR36
FSC
X501 4.43MHz
TR8 EF
FL1 BPF 5.06
TP3
FSC
CCD 2FSC
IMS 2FSC
TR11, 12
C.SYNC
C.CTL
IDL5V

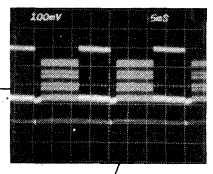
REC Y



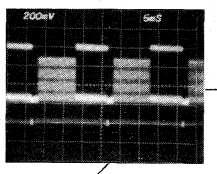
PB Y



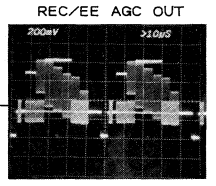
PB Y



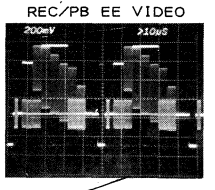
PB Y



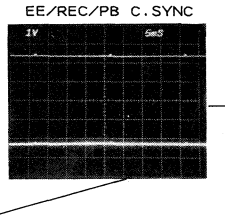
REC/EE AGC OUT



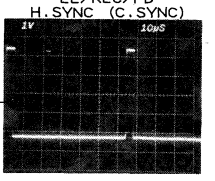
REC/PB EE VIDEO



EE/REC/PB C.SYNC

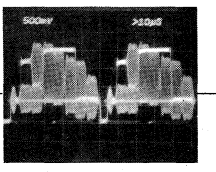


EE/REC/PB H.SYNC (C.SYNC)

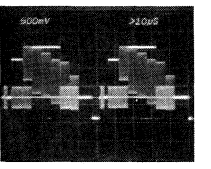


FROM OPERATION PCB

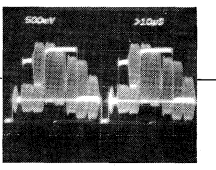
PB EE/VV VIDEO IN



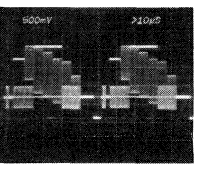
REC EE/VV VIDEO IN



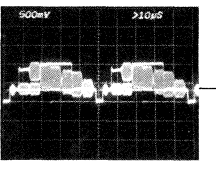
PB CV MIX OUT



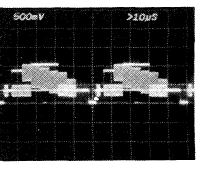
REC/EE/ CV MIX OUT



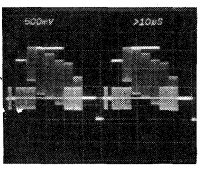
PB VIDEO OUT



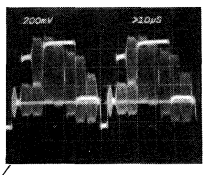
EE/REC VIDEO OUT



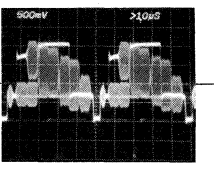
REC VIDEO



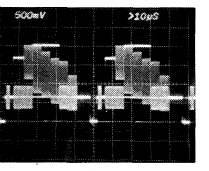
PB.MOD.V.IN



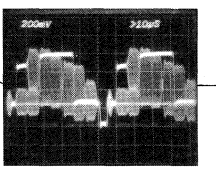
PB EE/VV VIDEO OUT



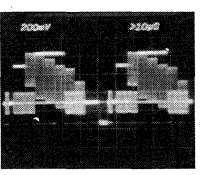
REC EE/VV VIDEO OUT



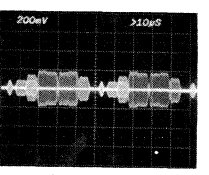
PB MIX VIDEO OUT



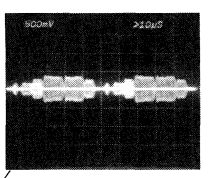
REC EE VIDEO OUT



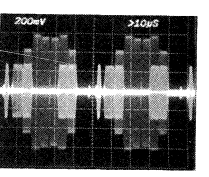
PB HIGH CHROMA



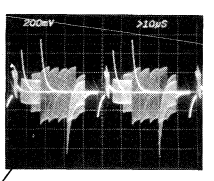
PB C



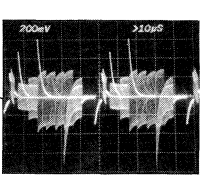
REC LOW CHROMA



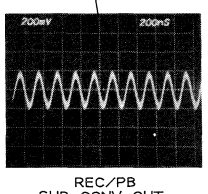
REC/EE REC VIDEO IN



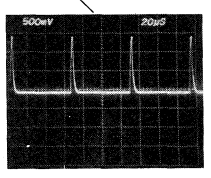
REC BPF (4.43MHz) IN



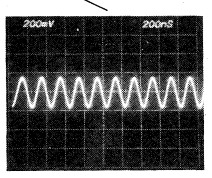
REC/PB SUB CONV OUT



FSC B-1D DET IN



REC/PB MAIN CONV IN



Y REC SIGNAL LINE

Y PB SIGNAL LINE

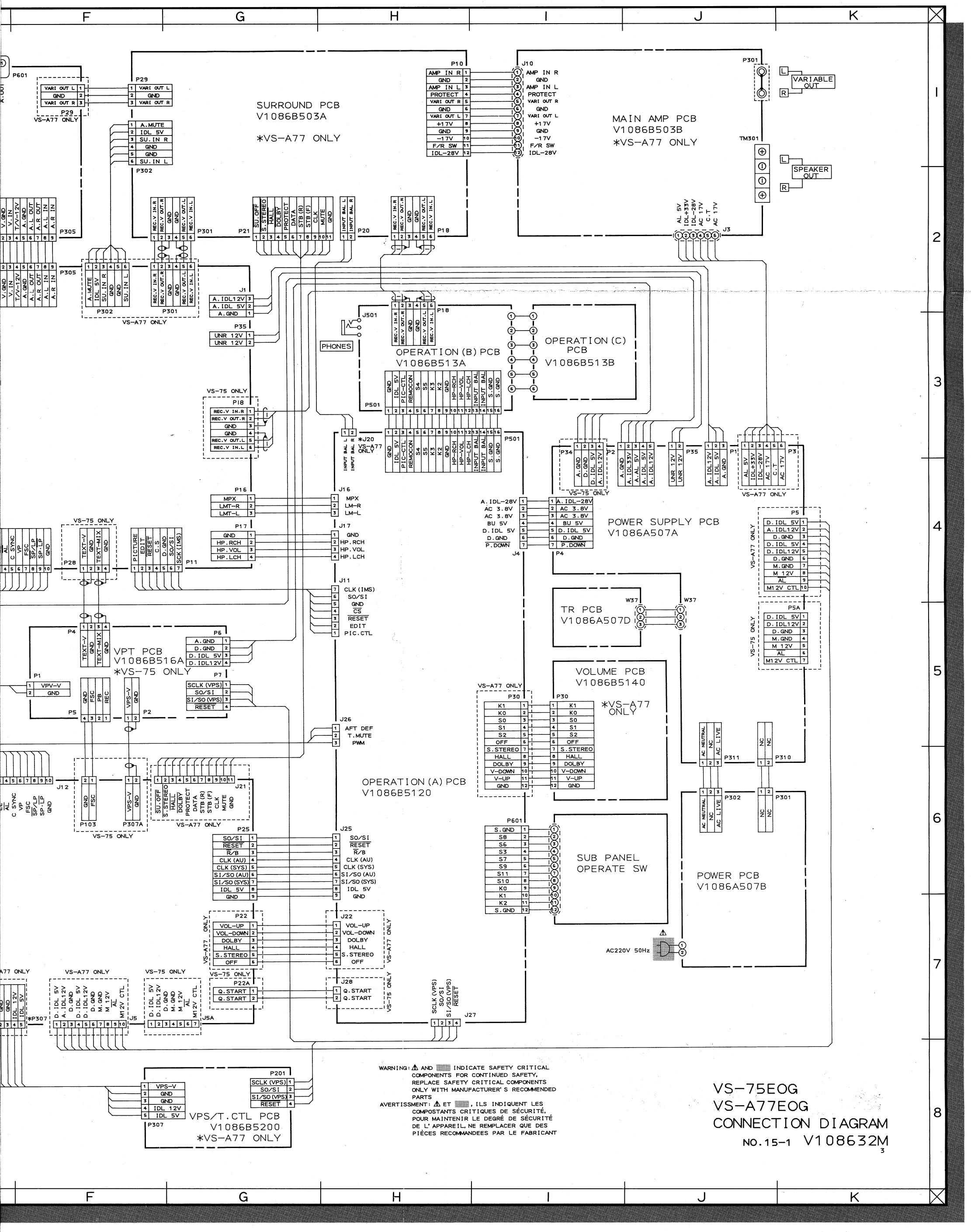
CHROMA REC SIGNAL LINE

CHROMA PB SIGNAL LINE

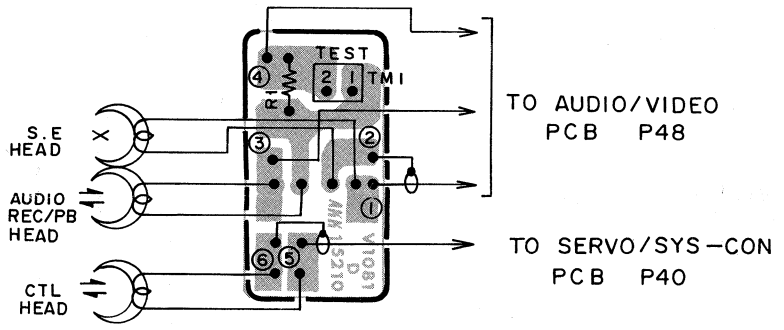
VS-75EOG
VS-A77EOG
VIDEO
BLOCK DIAGRAM
NO.5-5 V108642M
4

PRE AMP PCB
V1086B5090
CHROMA PCB
V1086B5020
VIDEO/AUDIO
P601
P29
VS-A77 ONLY
P302
P301
P303
P304
P305
P8
P6
P7
HIFI
SP
LP
CH1
CH2
DRUM BLK
P402
HF CH1
HF REC
HF CH2
GND
SP CH2 (R)
SP CH2 (P)
SP CH1 (P)
SP CH1 (R)
LP CH1 (R)
LP CH1 (P)
LP CH2 (P)
LP CH2 (R)
TEST
REC I LP
REC I SP
AUDIO IN
AUDIO OUT
L
R
PJ2
PJ1
PJ4
PJ3
AUDIO/VIDEO PCB V1086A5010
AUDIO BLK & VIDEO BLK
FULL ERASE HEAD
HVFMD0005B
FE HEAD PCB
V1081D5220
P47
P48
F.E
SE
A HEAD REC
A HEAD PB
RF OUT
ANT IN
RF CONVERTER
MDLK-3D063A
VTR TU OUT
RF IN
TV TUNER
TEME1-006A
RF PCB
6A00196A1
FRC13
FRC19
CN2
CN801
CN26
CN23
P13
P19
P14
P24
P15
P12
P28
P4
P1
P5
P2
VPT PCB
V1086B516A
*VS-75 ONLY
TEST
REC
GND
TM1
R1
1/6W
10
AUDIO R/P HEAD
SIDE ERASE HEAD
CTL HEAD
HVMZA1031A
P40
A/C HEAD PCB
V1081D5210
SERVO/SYSCON PCB
V1086A5050
P23
W14
W24
J15
J12
P103
P307A
SERVO LOCK
PCB
V1086D5998
C.SYNC
GND
IDL 5V
VJ
P44
P42
P43
P41
P45
P46
P101
P102
J103
J104
M901
LOADING MOTOR
RF-370C15370
MODE SELECTOR
D2ZQ-S2-2
CAPSTAN MOTOR
DVX-67A2R2
DRUM MOTOR
SM-250
REC SF
SW1
PL1
ROOM LAMP
TR2
PN268
(R, S)
TR1
PN268 (R, S)
PH1
ON2170 (Q, R)
D1
LN59AK
SENSOR (S) PCB
V1075D5140S
SENSOR (T) PCB
V1075D5140T
SENSOR PCB
V1075C5100
VS-75 ONLY
P307

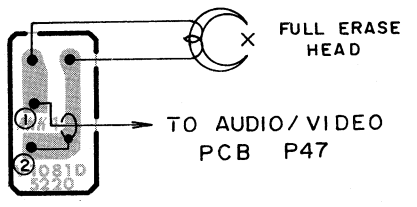
6

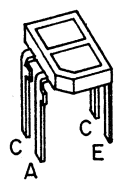

SURROUND PCB
V1086B503A
*VS-A77 ONLY
MAIN AMP PCB
V1086B503B
*VS-A77 ONLY
OPERATION (B) PCB
V1086B513A
OPERATION (C) PCB
V1086B513B
POWER SUPPLY PCB
V1086A507A
TR PCB
V1086A507D
VOLUME PCB
V1086B5140
*VS-A77 ONLY
SUB PANEL
OPERATE SW
POWER PCB
V1086A507B
VPT PCB
V1086B516A
*VS-75 ONLY
OPERATION (A) PCB
V1086B5120
VPS/T.CTL PCB
V1086B5200
*VS-A77 ONLY
VARIABLE OUT
SPEAKER OUT
PHONES
AC220V 50Hz
WARNING: ⚠ AND ▒ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSMENT: ⚠ ET ▒, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT
VS-75EOG
VS-A77EOG
CONNECTION DIAGRAM
NO.15-1 V108632M
3

A/C HEAD PCB
1081D5210

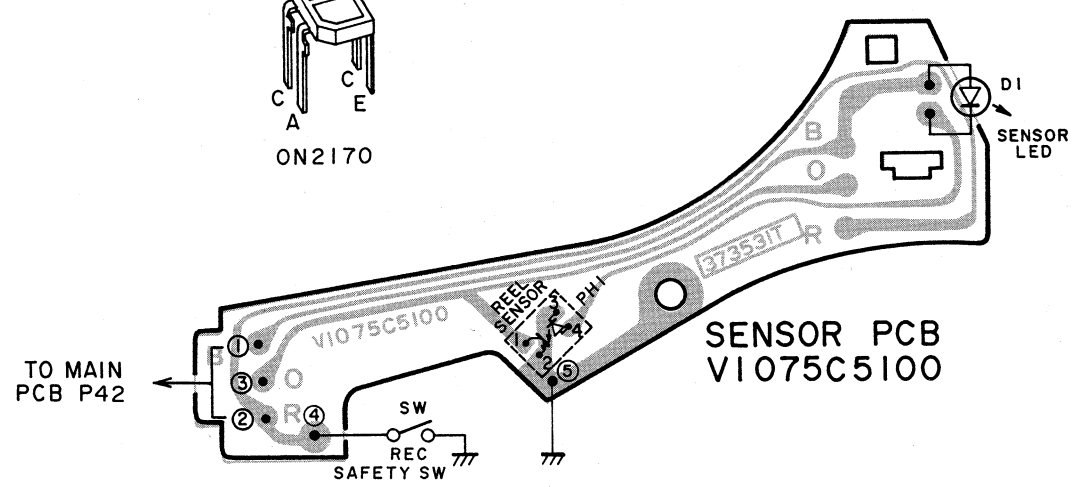


FULL ERASE HEAD PCB
V1081D5220

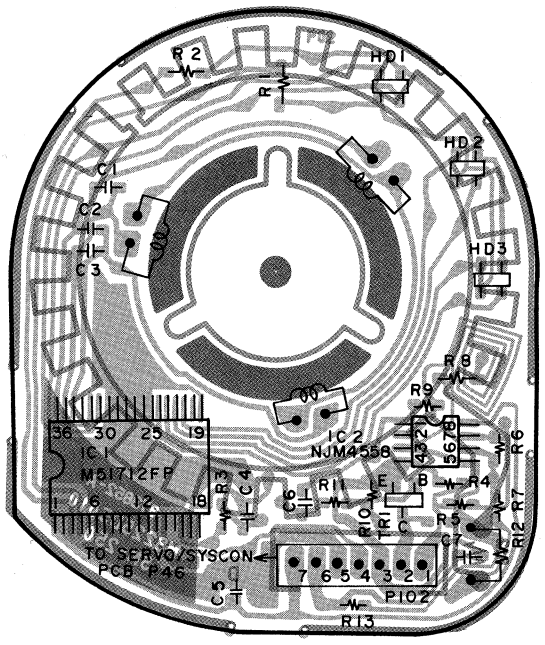




ON2170

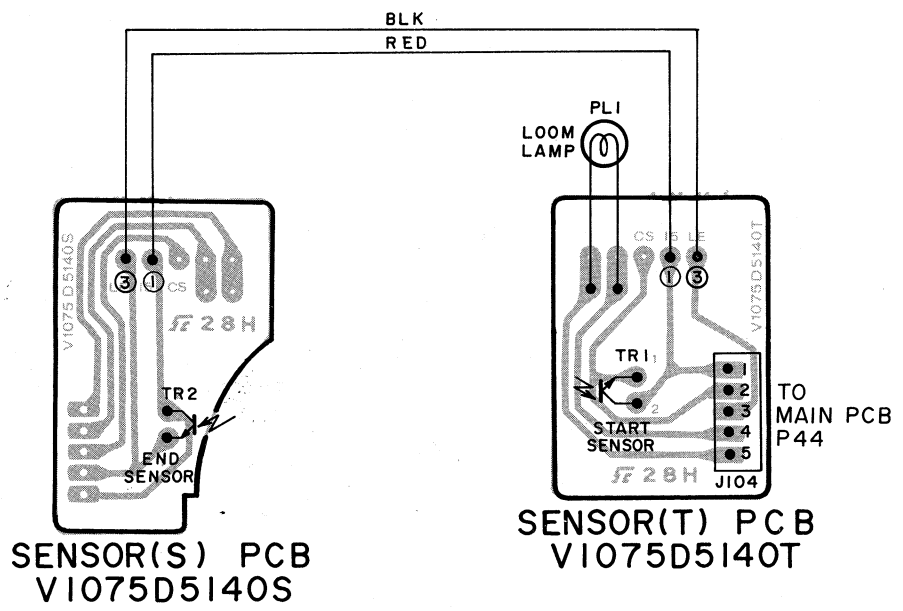


SENSOR PCB
V1075C5100



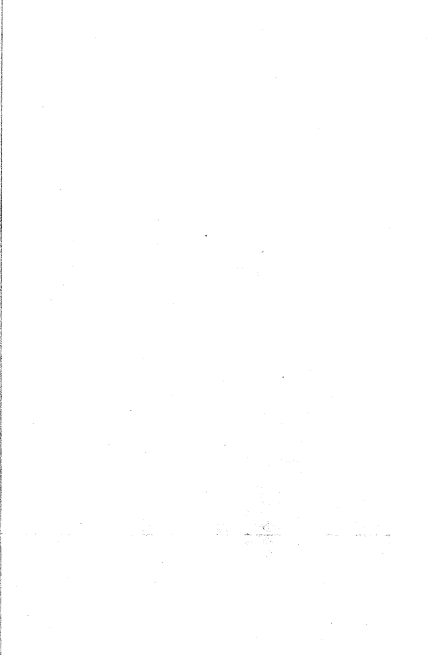
DRUM MOTOR M3225D5010
(P02)

PN268

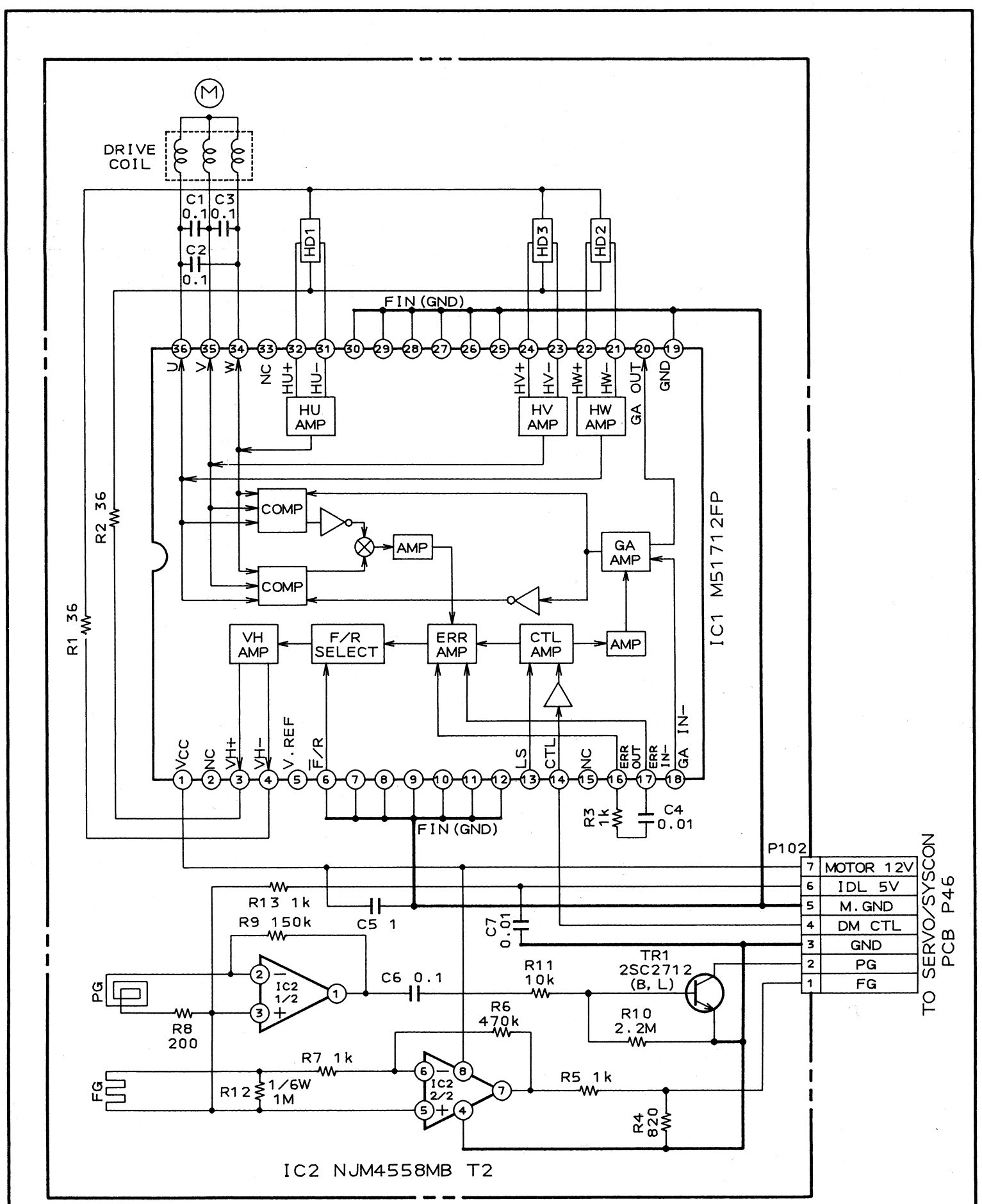


SENSOR(S) PCB
V1075D5140S

SENSOR(T) PCB
V1075D5140T



MOTOR M3225D5010
(P02)

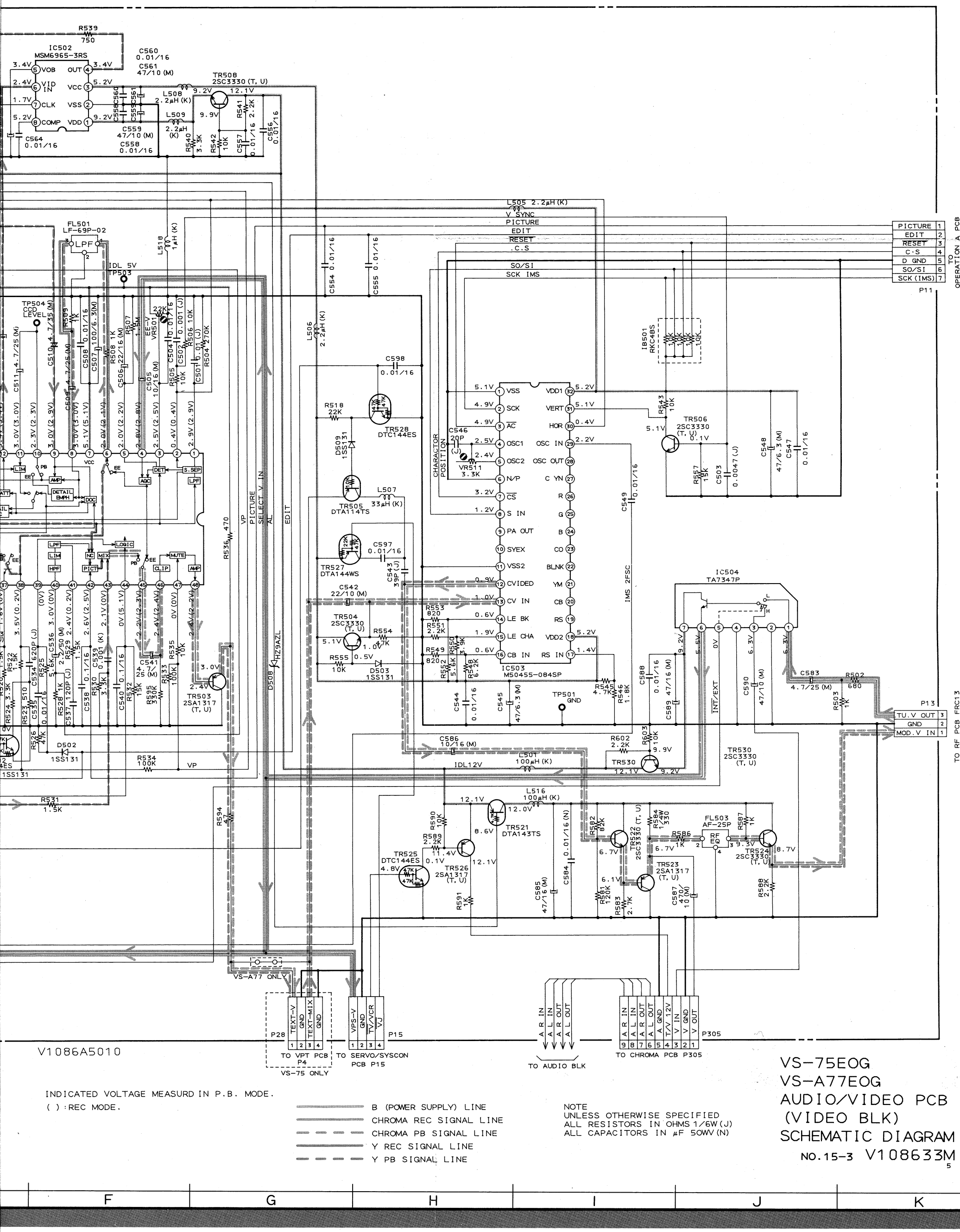


MOTOR PCB M3225D5010 (SM-250)

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN μF 50WV (J)

VS-75EOG
VS-A77EOG
MOTOR PCB
SCHEMATIC DIAGRAM
NO.15-2 V108619F

TO SERVO/SYSCON PCB J12
P12
REC START
PB
EE
AL
C SYNC
VP
FSC
SP/LP
SP-LP
GND
TO POWER PCB P1
J1
A. GND
A. IDL5V
A. IDL12V
IC502
MSM6965-3RS
VOB
VID IN
CLK
COMP
OUT
VCC
VSS
VDD
IC501
AN3231K
FL502
MYV-23R
FL501
LF-69P-02
TR507
2SA1317
(T, U)
TR518
2SA1286
(G, H, J)
TR519
2SA1286
(G, H, J)
TR520
DTA114ES
TR509
2SA1317
(T, U)
TR513
2SC3330
(T, U)
TR514
2SC3330 (T, U)
TR512
2SC3330
(T, U)
TR516
2SC3330
(T, U)
TR517
2SC3330
(T, U)
TR515
DTC144ES
TR529
DTC144ES
TR510
DTC144ES
TR502
DTC144ES
TR503
2SA1311
(T, U)
D504
1SS131
D507
1SS131
D501
1S2473
D502
1SS131
D511
1S2473
D510
1SS131
TP503
IDL 5V
TP504
COD LEVEL
TP506
REC FM
SW501
PAL
B/W
AUTO
R592
10K
TO AUDIO BLK
PB5V
IDL5V
IDL12V
SWP
TRIC
SLOW/STILL
INT/EXT
EE5V
REC START 12V
EE 5V
AL
VP
C SYNC
FSC
IDL 5V
CCD 2FSC
EE 5V
PB 5V
IMS 2FSC
INT/EXT
EE5V
PB C
SP/LP
DARK CLIP
WHITE CLIP
CARRIER
W/D CLIP
DEV
REC-C
REC-Y (SP)
REC-Y (LP)
P6
1 IDL5V
2 BGP
3 SLOW/STILL
4 TRIC
5 SW P
6 CH CTL
7 SP/LP
TO PRE AMP PCB P6
P7
5 PB L.C
4 GND
3 REC SIG
2 GND
1 PB FM
TO PRE AMP PCB P7
P303
PB LC
CH CTL
BGP
REC.C
PB.C
SP/LP
C SYNC
GND
V IN
TO CHROMA PCB P303
P304
CCD 2FSC
IDL5V
GND
IMS 2FSC
FSC
GND
PB 5V
MESECAM
C.KILLER
TO CHROMA PCB P304
A/V PCB (VIDEO BLK)
V1086A5010
INDICATED VOLTAGE MEASURD IN P
( ) : REC MODE.


IC502
MSM6965-3RS
R539
750
C560
0.01/16
C561
47/10 (M)
TR508
2SC3330 (T, U)
L508
2.2μH (K)
L509
2.2μH (K)
C559
47/10 (M)
C558
0.01/16
C564
0.01/16
R540
3.3K
R542
10K
R541
2.2K
C557
0.01/16
C556
0.01/16
FL501
LF-69P-02
LPF
IDL 5V
TP503
L518
1μH (K)
TP504
CCD LEVEL
L505 2.2μH (K)
V SYNC
PICTURE
EDIT
RESET
.C.S
SO/SI
SCK IMS
C554 0.01/16
C555 0.01/16
L506
2.2μH (K)
C598
0.01/16
R518
22K
TR528
DTC144ES
D509
1SS131
TR505
DTA114TS
L507
33μH (K)
TR527
DTA144WS
C597
0.01/16
C543
39P (J)
C542
22/10 (M)
TR504
2SC3330
(T, U)
R554
47K
R555
10K
D503
1SS131
R553
820
R551
2.2K
R550
3.9K
R549
820
R552
5.6K
R548
6.2K
IC503
M50455-084SP
TP501
GND
R545
4.7K
R546
1.8K
C544
0.01/16
C545
47/6.3 (M)
C549
0.01/16
IMS 2FSC
CHARACTOR POSITION
C546
20P (J)
VR511
3.3K
IB501
RKC4BS
R543
10K
TR506
2SC3330
(T, U)
C548
47/6.3 (M)
C547
0.01/16
R557
15K
C503
0.0047 (J)
IC504
TA7347P
C588
0.01/16
C589
47/16 (M)
C590
47/10 (M)
INT/EXT
C583
4.7/25 (M)
R502
680
R503
1K
P13
TU.V OUT 3
GND 2
MOD.V IN 1
TO RF PCB FRC13
C586
10/16 (M)
L501
100μH (K)
IDL12V
R602
2.2K
R603
10K
TR530
2SC3330
(T, U)
L516
100μH (K)
TR521
DTA143TS
R590
10K
R589
2.2K
TR525
DTC144ES
TR526
2SA1317
(T, U)
R591
1K
C585
47/16 (M)
C584
0.01/16 (N)
R582
82K
TR522
2SC3330 (T, U)
R584
1.2K/W
330
FL503
AF-25P
RF EQ
R586
1K
R587
1K
TR524
2SC3330
(T, U)
TR523
2SA1317
(T, U)
R581
120K
R583
2.7K
C587
47/10 (M)
R588
2.2K
R535
470
VP
PICTURE
SELECT V IN
AL
EDIT
D508
HZ9AZL
R594
47
VS-A77 ONLY
P28
TEXT-V
GND
TEXT-MIX
GND
TO VPT PCB P4
VS-75 ONLY
VPS-V
GND
TV/VCR
VJ
P15
TO SERVO/SYSCON PCB P15
A R IN
A L IN
A R OUT
A L OUT
TO AUDIO BLK
A R IN
A L IN
A R OUT
A L OUT
A GND
T/V 12V
V IN
V GND
V OUT
P305
TO CHROMA PCB P305
P11
PICTURE 1
EDIT 2
RESET 3
C.S 4
D GND 5
SO/SI 6
SCK (IMS) 7
TO OPERATION A PCB J11
R539
R531
1.5K
R534
100K
D502
1SS131
TR503
2SA1317
(T, U)
R536
470
R526
47K
R524
3.3K
R523
510
R528
1K
R529
1.5K
R525
5.6K
R595
330K
R533
100K
R535
10K
R530
3.3K
R532
15K
C541
4.7/25 (M)
C534
620P (J)
C535
0.01/16
C536
2.2/50 (M)
C537
120P (J)
C538
0.1/16
C539
0.001 (K)
C540
0.1/16
R522
1.5K
R509
1K
R508
1K
R507
1.5M
R506
10K
R505
10K
R504
270K
C508
0.01/16
C507
100/6.3 (M)
C506
22/16 (M)
C505
10/16 (M)
C504
0.001 (J)
C502
0.01/16
C501
0.01 (J)
VR501
22K
EE-V
C509
4.7/25 (M)
C510
4.7/25 (M)
C511
4.7/25 (M)
VCC
DET
S.SEP
AQC
LPF
DETAIL EMPH
DOC
AMP
LIM
HPF
NC
MIX
PICT
LOGIC
MUTE
CLIP
PB
EE
V1086A5010
INDICATED VOLTAGE MEASURD IN P.B. MODE.
( ) : REC MODE.
B (POWER SUPPLY) LINE
CHROMA REC SIGNAL LINE
CHROMA PB SIGNAL LINE
Y REC SIGNAL LINE
Y PB SIGNAL LINE
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (N)
VS-75EOG
VS-A77EOG
AUDIO/VIDEO PCB
(VIDEO BLK)
SCHEMATIC DIAGRAM
NO.15-3 V108633M5

PRINCPAL PARTs LOCATION

ICs

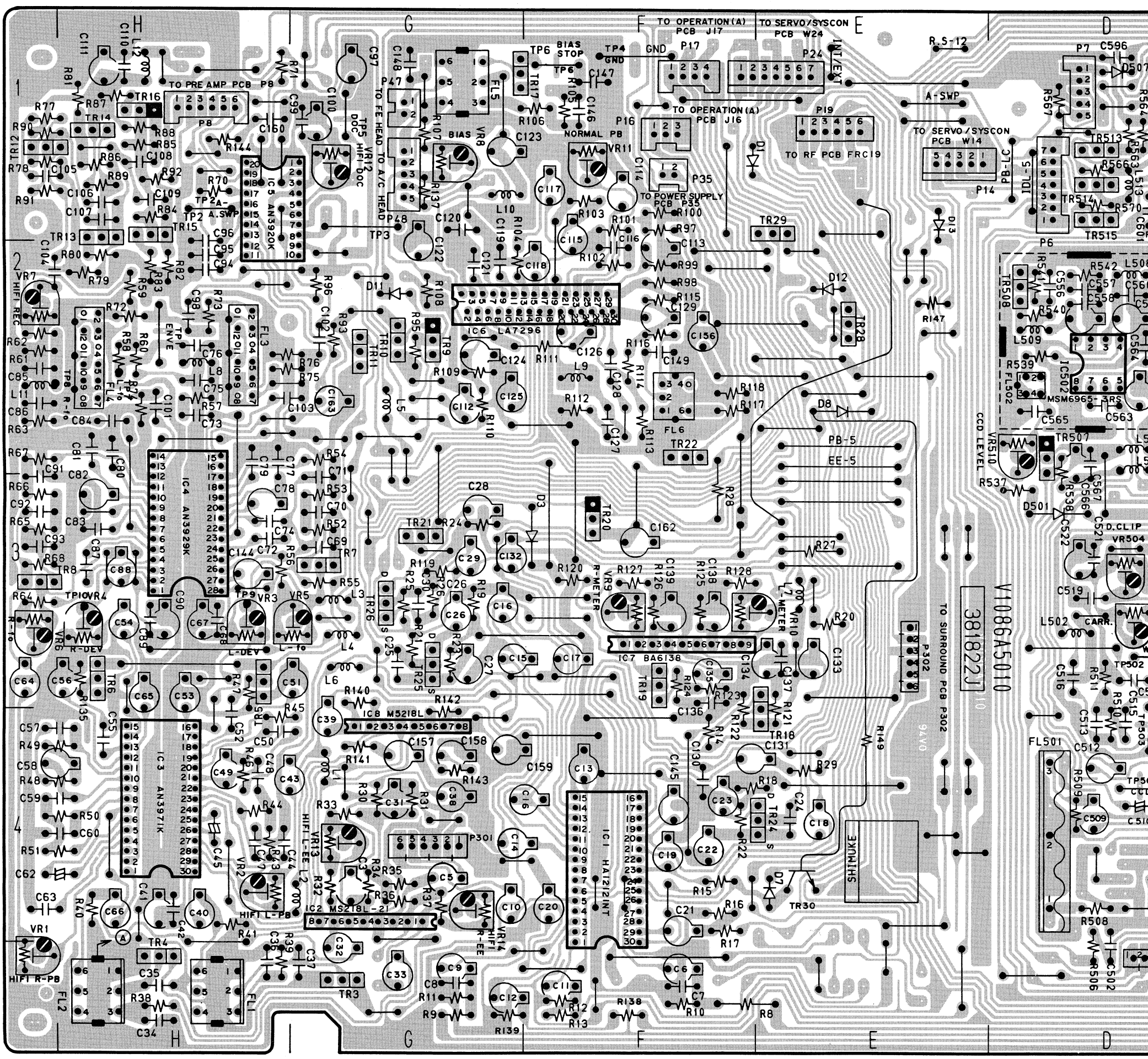
IC1 ····· F4
IC2 ····· G4
IC3 ····· H4
IC4 ····· H2,3
IC5 ····· H,C1
IC6 ····· G,F2
IC7 ····· F3
IC8 ····· G4
IC501 ····· C3,4
IC502 ····· D2
IC503 ····· C2
IC504 ····· A4

TRANSISTORs

TR3 ····· G5
TR4 ····· H5
TR5 ····· H3
TR6 ····· H3
TR7 ····· G3
TR8 ····· H3
TR9 ····· G2
TR10 ····· G2
TR11 ····· G2
TR12 ····· H1
TR13 ····· H1
TR14 ····· H1
TR15 ····· H1
TR16 ····· H1
TR17 ····· G1
TR18 ····· E3,4
TR19 ····· F3
TR20 ····· F3
TR21 ····· G3
TR22 ····· F3
TR24 ····· E4
TR25 ····· G3
TR26 ····· G3
TR28 ····· E2
TR29 ····· E1
TR30 ····· E4
TR502 ····· B4
TR503 ····· C4
TR504 ····· C2
TR505 ····· C2
TR506 ····· D2,3
TR507 ····· D2,3
TR508 ····· D2
TR509 ····· C1
TR510 ····· C1
TR512 ····· D1
TR513 ····· D1
TR514 ····· D1
TR515 ····· D1
TR516 ····· C1
TR517 ····· B1
TR518 ····· B1
TR519 ····· B1
TR520 ····· B1
TR521 ····· A1
TR522 ····· B3
TR523 ····· B3
TR524 ····· B3
TR525 ····· B4
TR526 ····· B4
TR527 ····· C1
TR528 ····· B2
TR529 ····· D1,2
TR530 ····· B4

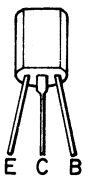
CONNECTORs

P6 ····· D1
P7 ····· D1
P8 ····· H1
P11 ····· C2
P12 ····· A,B1
P13 ····· A,B1
P14 ····· E1
P15 ····· B2
P16 ····· F1
P17 ····· F1
P18 ····· G4
P19 ····· E1
P24 ····· E,F1
P28 ····· C2
P35 ····· F1
P47 ····· G1
P48 ····· G1
P301 ····· H1
P302 ····· C2
P303 ····· C2
P304 ····· C2
P305 ····· C2
J1 ····· A1
J19 ····· A1



CONNECTORs

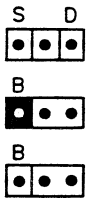
P 6	D I
P 7	D I
P 8	H I
P 11	C 2
P 12	A, B I
P 13	A, B I
P 14	E I
P 15	B 2
P 16	F I
P 17	F I
P 18	G 4
P 19	E I
P 24	E, F I
P 28	C 2
P 35	F I
P 47	G I
P 48	G I
P 301	G 4
P 302	E 3
P 303	D 5
P 304	C, D 3
P 305	A, B 5
J I	B I
J 19	E I



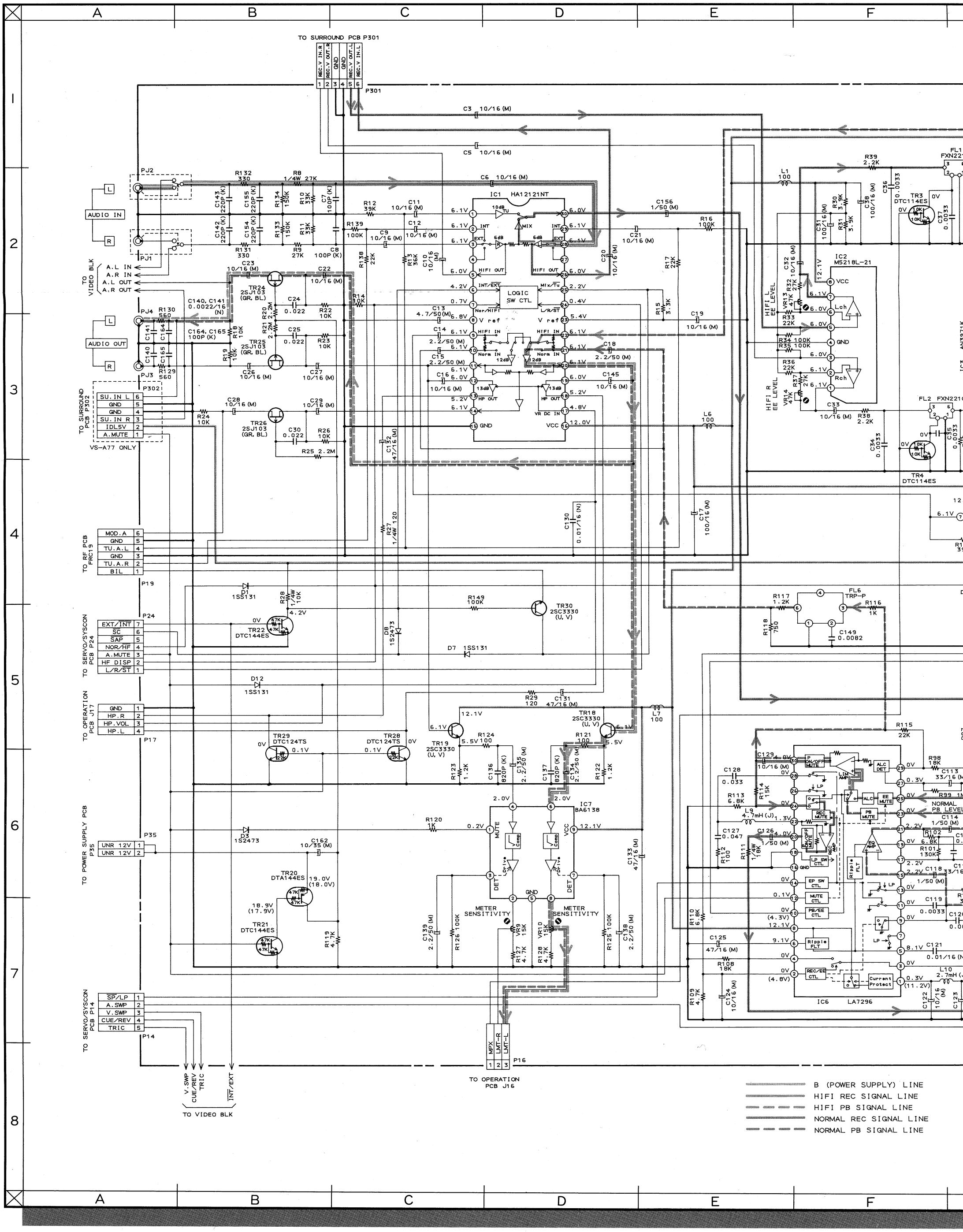
2SA1286

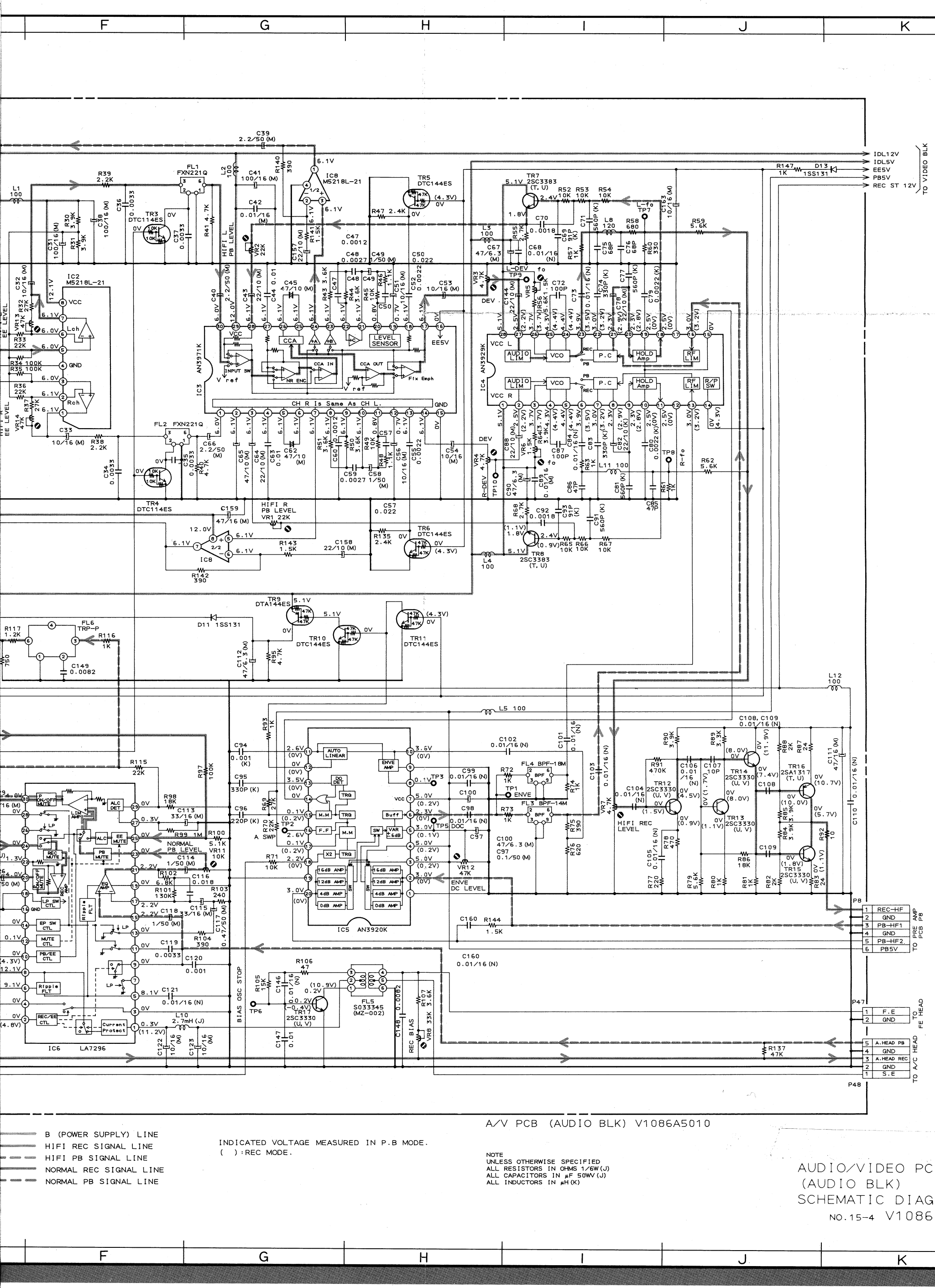
2SA1317
2SC3330
DTA114ES
DTC124TS
DTB144WS
DTC114ES
DTC144ES

2SJ103



AUDIO / VIDEO PCB V1086A5010


TO SURROUND PCB P301
REC.V IN.R
REC.V OUT.R
GND
GND
REC.V OUT.L
REC.V IN.L
P301
AUDIO IN
AUDIO OUT
TO VIDEO BLK
A.L IN
A.R IN
A.L OUT
A.R OUT
IC1 HA12121NT
LOGIC SW CTL
IC2 M5218L-21
HIFI L EE LEVEL
HIFI R EE LEVEL
Lch
Rch
IC7 BA6138
IC6 LA7296
TR24 2SJ103 (GR, BL)
TR25 2SJ103 (GR, BL)
TR26 2SJ103 (GR, BL)
TR18 2SC3330 (U, V)
TR19 2SC3330 (U, V)
TR20 DTA144ES
TR21 DTC144ES
TR22 DTC144ES
TR28 DTC124TS
TR29 DTC124TS
TR30 2SC3330 (U, V)
TR3 DTC114ES
TR4 DTC114ES
FL1 FXN221
FL2 FXN221
FL6 TRP-P
P302
SU.IN L
GND
GND
SU.IN R
IDL5V
A.MUTE
VS-A77 ONLY
TO SURROUND PCB P302
TO RF PCB FRC19
MOD.A
GND
TU.A.L
GND
TU.A.R
BIL
P19
TO SERVO/SYSCON PCB P24
EXT/INT
SC
SAP
NOR/HF
A.MUTE
HF DISP
L/R/ST
P24
TO OPERATION PCB J17
GND
HP.R
HP.VOL
HP.L
P17
TO POWER SUPPLY PCB P35
UNR 12V
UNR 12V
P35
TO SERVO/SYSCON PCB P14
SP/LP
A.SWP
V.SWP
CUE/REV
TRIC
P14
V.SWP
CUE/REV
TRIC
INT/EXT
TO VIDEO BLK
MPX
LMT-R
LMT-L
P16
TO OPERATION PCB J16
B (POWER SUPPLY) LINE
HIFI REC SIGNAL LINE
HIFI PB SIGNAL LINE
NORMAL REC SIGNAL LINE
NORMAL PB SIGNAL LINE



B (POWER SUPPLY) LINE
HIFI REC SIGNAL LINE
HIFI PB SIGNAL LINE
NORMAL REC SIGNAL LINE
NORMAL PB SIGNAL LINE

INDICATED VOLTAGE MEASURED IN P.B MODE.
( ) : REC MODE.

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)
ALL INDUCTORS IN μH(K)

A/V PCB (AUDIO BLK) V1086A5010

AUDIO/VIDEO PCB (AUDIO BLK) SCHEMATIC DIAGRAM

NO.15-4 V108634M
5

PRINCPAL PARTs LOCATION

ICs

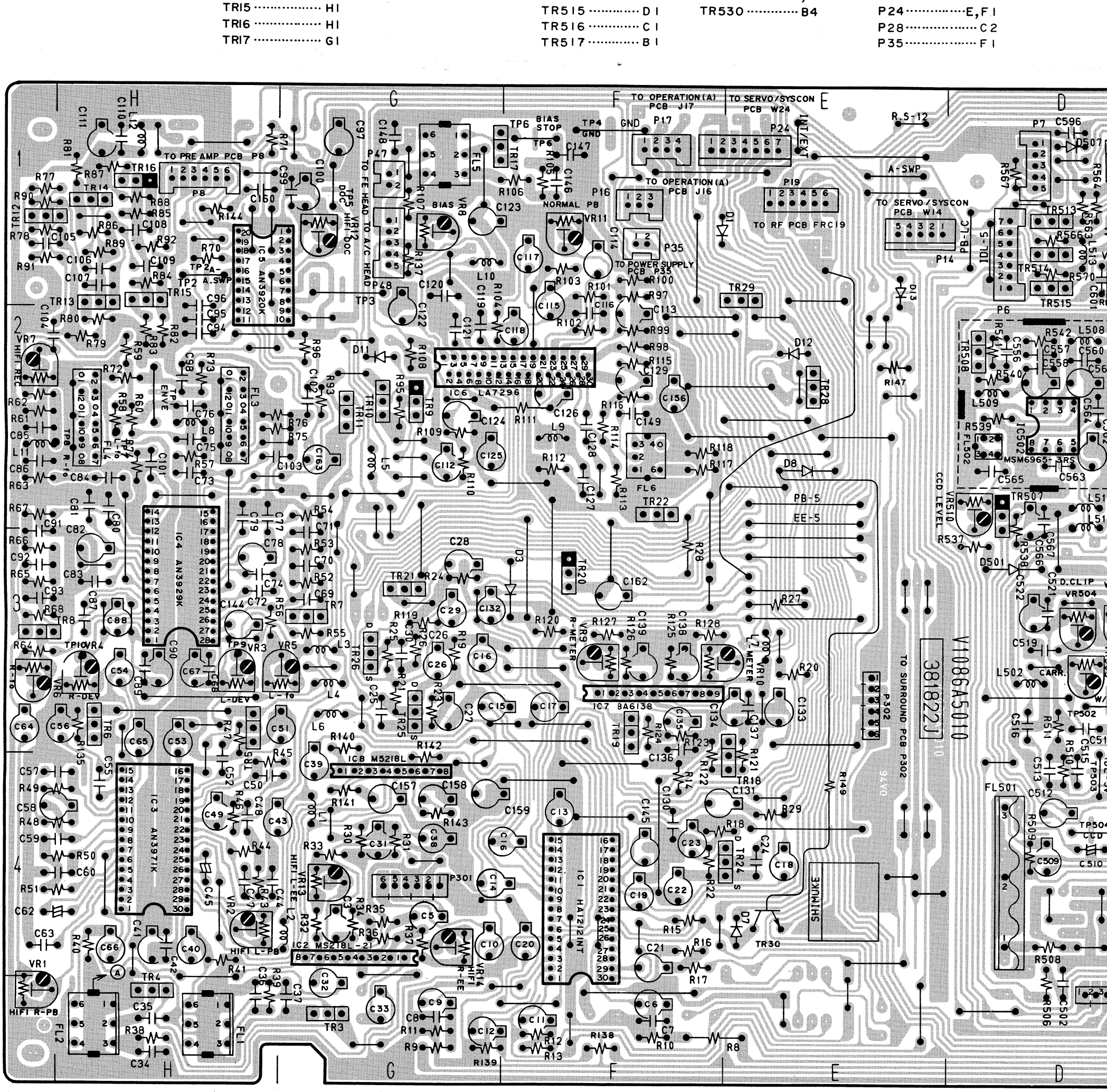
IC1 ..... F4
IC2 ..... G4
IC3 ..... H4
IC4 ..... H2,3
IC5 ..... H,C1
IC6 ..... G,F2
IC7 ..... F3
IC8 ..... G4
IC501 ..... C3,4
IC502 ..... D2
IC503 ..... C2
IC504 ..... A4

TRANSISTORs

TR3 ..... G5
TR4 ..... H5
TR5 ..... H3
TR6 ..... H3
TR7 ..... G3
TR8 ..... H3
TR9 ..... G2
TRI0 ..... G2
TRI1 ..... G2
TRI2 ..... HI
TRI3 ..... HI
TRI4 ..... HI
TRI5 ..... HI
TRI6 ..... HI
TRI7 ..... GI
TR18 ..... E3,4
TR19 ..... F3
TR20 ..... F3
TR21 ..... G3
TR22 ..... F3
TR24 ..... E4
TR25 ..... G3
TR26 ..... G3
TR28 ..... E2
TR29 ..... E1
TR30 ..... E4
TR502 ..... B4
TR503 ..... C4
TR504 ..... C2
TR505 ..... C2
TR506 ..... D2,3
TR507 ..... D2,3
TR508 ..... D2
TR509 ..... C1
TR510 ..... C1
TR512 ..... D1
TR513 ..... D1
TR514 ..... D1
TR515 ..... D1
TR516 ..... C1
TR517 ..... B1
TR518 ..... B1
TR519 ..... B1
TR520 ..... B1
TR521 ..... A1
TR522 ..... B3
TR523 ..... B3
TR524 ..... B3
TR525 ..... B4
TR526 ..... B4
TR527 ..... C1
TR528 ..... B2
TR529 ..... D1,2
TR530 ..... B4

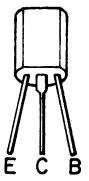
CONNECTORs

P 6 ..... D1
P 7 ..... D1
P 8 ..... H1
P 11 ..... C2
P 12 ..... A,B1
P 13 ..... A,B1
P 14 ..... E1
P 15 ..... B2
P 16 ..... F1
P 17 ..... F1
P 18 ..... G4
P 19 ..... E1
P24 ..... E,F1
P28 ..... C2
P35 ..... F1
P47 .....
P48 .....
P301 .....
P302 .....
P303 .....
P304 .....
P305 .....
J1 .....
J19 .....



CONNECTORs

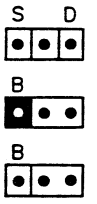
P 6	D I	P47	G I
P 7	D I	P48	G I
P 8	H I	P301	G4
P 11	C2	P302	E3
P 12	A,B I	P303	D5
P 13	A,B I	P304	C,D3
P 14	E I	P305	A,B5
P 15	B2		
P 16	F I	J I	B I
P 17	F I	J19	E I
P 18	G4		
P 19	E I		
P24	E,F I		
P28	C2		
P35	F I		

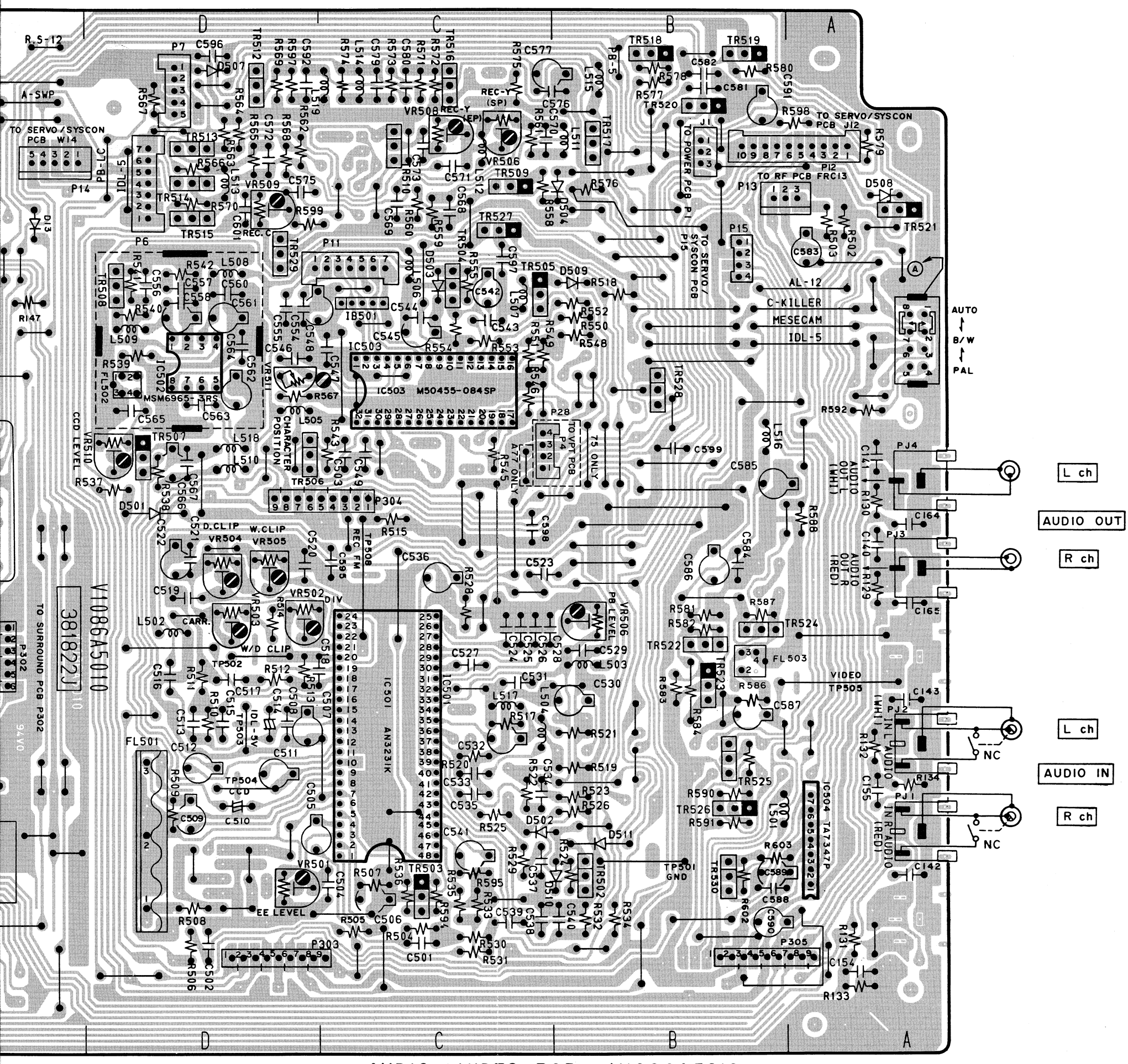


2SA1286

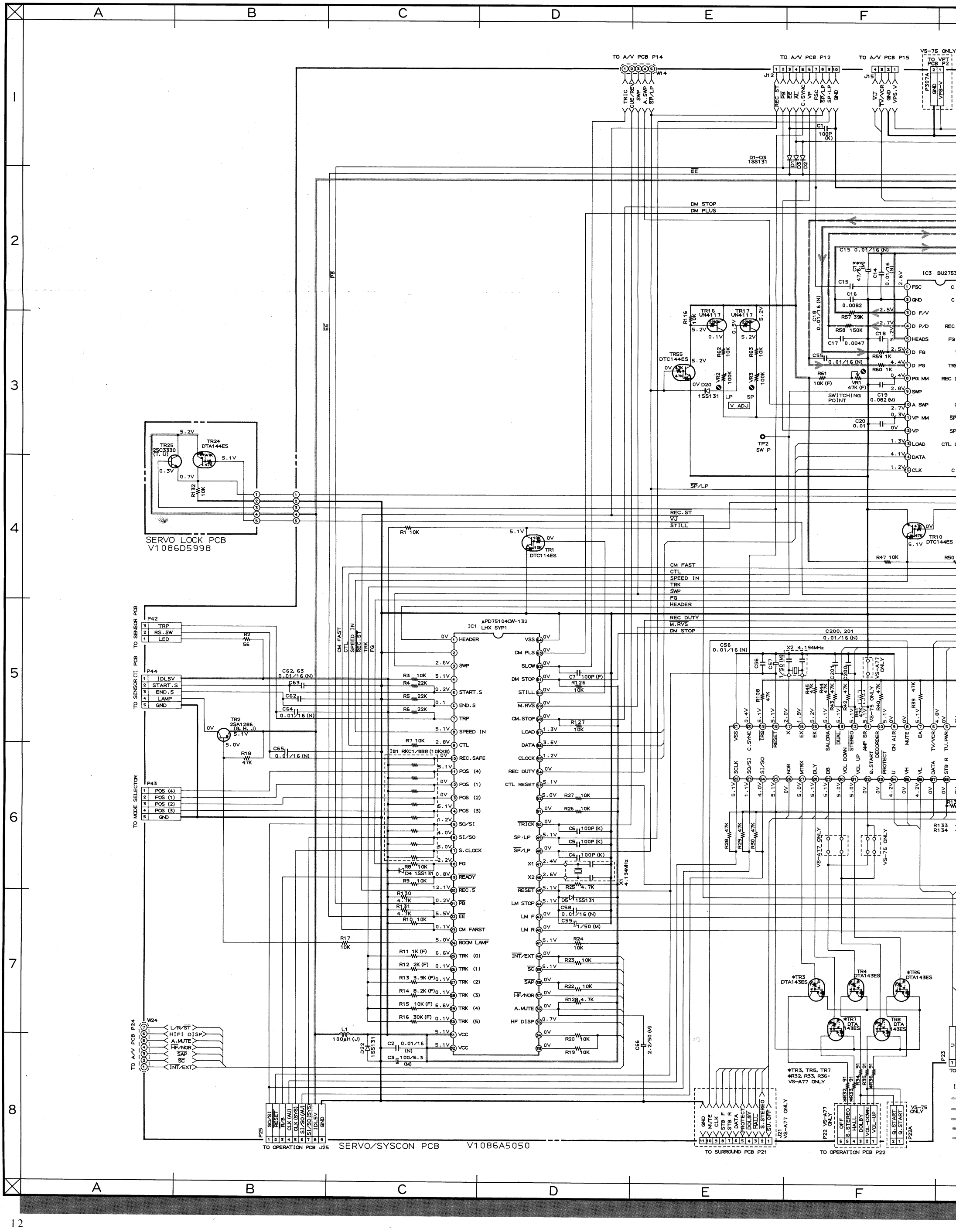
2SA1317
2SC3330
DTA114ES
DTC124TS
DTB144WS
DTC114ES
DTC144ES

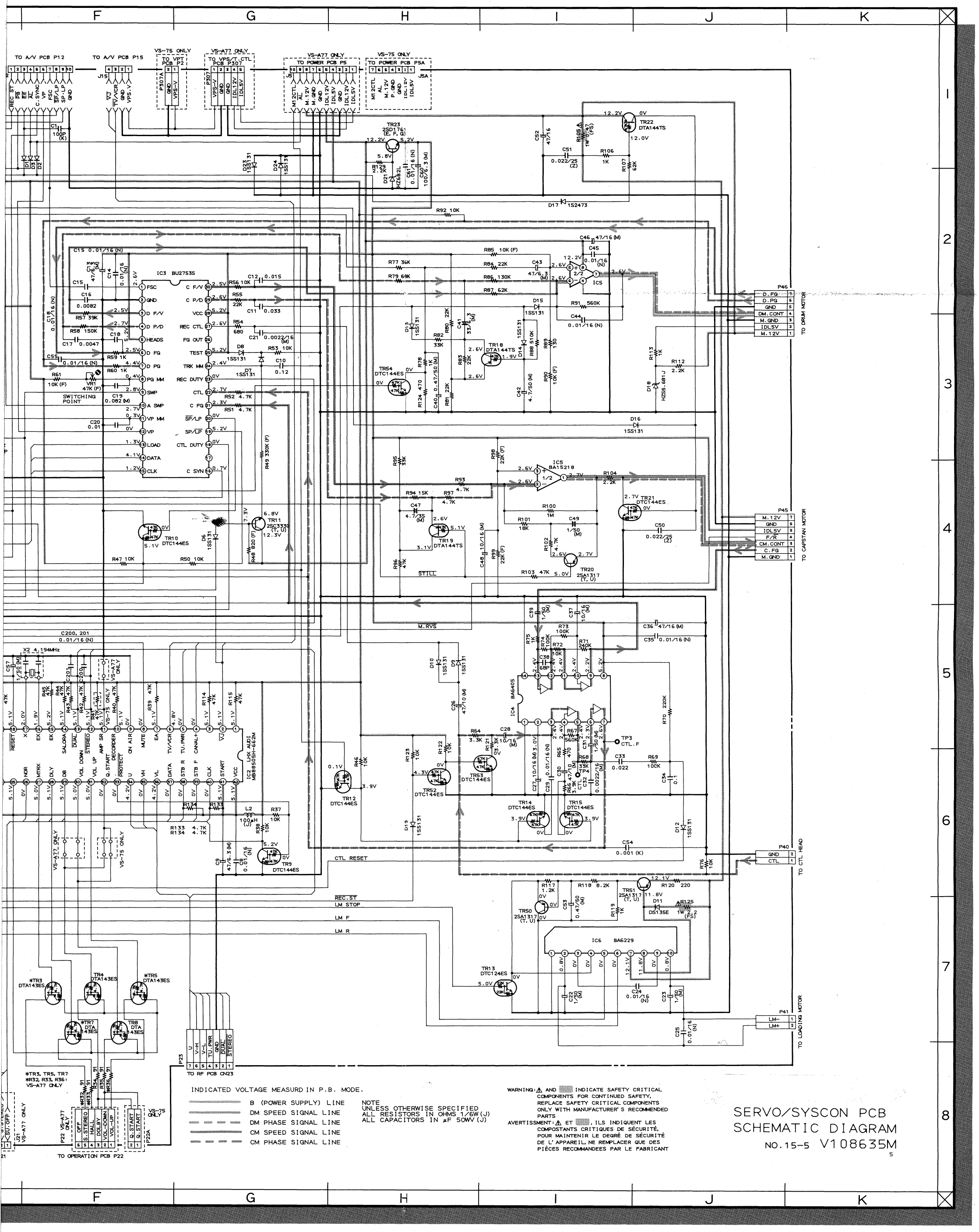
2SJ103





AUDIO / VIDEO PCB V1086A5010


TO A/V PCB P14
TO A/V PCB P12
TO A/V PCB P15
VS-75 ONLY
TO VPT PCB P2
W14
J12
J15
TR1C
CUE/REV
SWP
A.SWP
SP/LP
REC ST
PB
EE
AL
C.SYNC
VP
FSC
SP/LP
SP-LP
GND
VJ
TV/VCR
GND
VPS-V
P307A
C1 100P (K)
D1~D3 1SS131
DM STOP
DM PLUS
C15 0.01/16 (N)
C14 0.01/16 (N)
C16 0.0082
C17 0.0047
C18 0.01/16 (N)
C55 0.01/16 (N)
C19 0.082 (M)
C20 0.01
IC3 BU2753
FSC
GND
D F/V
D P/D
HEADS
D FG
D PG
PG MM
SWP
A SWP
VP MM
VP
LOAD
DATA
CLK
R57 39K
R58 150K
R59 1K
R60 1K
R61 10K (F)
VR1 47K (F)
SWITCHING POINT
TP2 SW P
TR16 UN4117
TR17 UN4117
R116 10K
R62 10K
R63 10K
VR2 100K
VR3 100K
TR55 DTC144ES
D20 1SS131
LP
SP
V ADJ
SERVO LOCK PCB
V1086D5998
TR25 2SC3330 (T, U)
TR24 DTA144ES
R132 10K
SP/LP
REC.ST
VJ
STILL
R1 10K
TR1 DTC114ES
TR10 DTC144ES
R47 10K
R50
CM FAST
CTL
SPEED IN
TRK
SWP
FG
HEADER
REC DUTY
M.RVS
DM STOP
C200, 201 0.01/16 (N)
C56 0.01/16 (N)
X2 4.194MHz
C56
C57 1/50 (M)
C201
C200
VS-A77 ONLY
R108 47K
R45 47K
R44 47K
R43 47K
R42 47K
R41 47K
R40 47K
R39 47K
VSS
C.SYNC
IRQ
RESET
X
EX
EK
SALORA
DUAL
STEREO
AMP SR
DECORDER
ON AIR
MUTE
EA
TV/VCR
TU.PWR
SCLK
SO/SI
SI/SO
NOR
MTRX
DLY
DB
VOL DOWN
VOL UP
Q.START
PROTECT
U
VH
VL
DATA
STB R
R133
R134
R28 47K
R29 47K
R30 47K
VS-A77 ONLY
VS-75 ONLY
TO SENSOR PCB
P42
TRP
RS.SW
LED
R2 56
TO SENSOR (T) PCB
P44
IDL5V
START.S
END.S
LAMP
GND
C62, 63 0.01/16 (N)
C62
C64 0.01/16 (N)
TR2 2SA1286 (G, H, J)
R18 47K
C65 0.01/16 (N)
TO MODE SELECTOR
P43
POS (4)
POS (1)
POS (2)
POS (3)
GND
μPD75104CW-132
IC1
LHX SYP1
HEADER
SWP
START.S
END.S
TRP
SPEED IN
CTL
REC.SAFE
POS (4)
POS (1)
POS (2)
POS (3)
SO/SI
SI/SO
S.CLOCK
FG
READY
REC.S
PB
EE
CM FARST
ROOM LAMP
TRK (0)
TRK (1)
TRK (2)
TRK (3)
TRK (4)
TRK (5)
VCC
VCC
R3 10K
R4 22K
R5 22K
R6 22K
R7 10K
IB1 RKC1/888 (10KX8)
R8 10K
D4 1SS131
R9 10K
R130 4.7K
R131 4.7K
R10 10K
R17 10K
R11 1K (F)
R12 2K (F)
R13 3.9K (F)
R14 8.2K (F)
R15 10K (F)
R16 30K (F)
L1 100μH (J)
D22 1SS131
C2 0.01/16 (N)
C3 100/6.3 (M)
VSS
DM PLS
SLOW
DM STOP
STILL
M.RVS
CM.STOP
LOAD
DATA
CLOCK
REC DUTY
CTL RESET
TRICK
SP·LP
SP/LP
X1
X2
RESET
LM STOP
LM F
LM R
INT/EXT
SC
SAP
HF/NOR
A.MUTE
HF DISP
C7 100P (F)
R126 10K
R127 10K
R27 10K
R26 10K
C6 100P (K)
C5 100P (K)
C4 100P (K)
X1 4.194MHz
R25 4.7K
D5 1SS131
C58 0.01/16 (N)
C59 1/50 (M)
R24 10K
R23 10K
R22 10K
R128 4.7K
R20 10K
R19 10K
C66 2.2/50 (M)
TO A/V PCB P24
W24
L/R/ST
HIFI DISP
A.MUTE
HF/NOR
SAP
SC
INT/EXT
P25
SO/SI
RESET
R/B
CLK (AU)
CLK (SYS)
SI/SO (AU)
SI/SO (SYS)
IDL5V
GND
TO OPERATION PCB J25
SERVO/SYSCON PCB V1086A5050
*TR3 DTA143ES
TR4 DTA143ES
*TR5 DTA143ES
*TR7 DTA 143ES
TR8 DTA 143ES
*TR3, TR5, TR7
*R32, R33, R36
VS-A77 ONLY
*R32
*R33
*R34
*R35
*R36
J21 VS-A77 ONLY
GND
MUTE
CLK
STB F
STB R
DATA
PROTECT
DOLBY
HALL
S.STEREO
SU.OFF
TO SURROUND PCB P21
P22 VS-A77 ONLY
OFF
S.STEREO
HALL
DOLBY
VOL-DOWN
VOL-UP
Q.START
Q.START
P22A
VS-75 ONLY
TO OPERATION PCB P22
P23


TO A/V PCB P12
TO A/V PCB P15
VS-75 ONLY
TO VPT PCB P2
VS-A77 ONLY
TO VPS/T.CTL PCB P307
VS-A77 ONLY
TO POWER PCB P5
VS-75 ONLY
TO POWER PCB P5A
REC. ST
FS
EE
AL
C.SYNC
VP
FSC
SP/LP
SP-LP
GND
VD
TV/VCR
GND
VPS.V
VPS-V
M.12CTL
AL
M.12V
M.GND
IDL12V
IDL5V
P.GND
TR23 2SD1761 (E, F, G)
TR22 DTA144TS
TR21 DTA144TS
TR20 2SA1317 (T, U)
TR19 DTA144TS
TR18 DTA144TS
TR54 DTC144ES
TR53 DTC144ES
TR52 DTC144ES
TR14 DTC144ES
TR15 DTC144ES
TR12 DTC144ES
TR11 2SC3330 (T, U)
TR10 DTC144ES
TR9 DTC144ES
TR51 2SA1317 (T, U)
TR50 2SA1317 (T, U)
TR13 DTC124ES
*TR3 DTA143ES
TR4 DTA143ES
*TR5 DTA143ES
*TR7 DTA143ES
TR8 DTA143ES
IC3 BU2753S
IC5 BA15218
IC4 BA6405
IC6 BA6229
IC2 LHX AUDI MB88505H-662M
D17 1S2473
D16 1SS131
D15 1SS131
D13 1SS131
D14 1SS131
D12 1SS131
D10 1SS131
D9 1SS131
D8 1SS131
D7 1SS131
D6 1SS131
D23 1SS131
D24 1SS131
D18 HZS5.6B1J
D19 1SS131
D11 DS135E
D21 HZ6B2L
X2 4.194MHz
SWITCHING POINT
STILL
M.RVS
CTL RESET
REC.ST
LM STOP
LM F
LM R
P45
D.FG
D.PG
GND
DM.CONT
M.GND
IDL5V
M.12V
TO DRUM MOTOR
P45
M.12V
GND
IDL5V
F/R
CM.CONT
C.FG
M.GND
TO CAPSTAN MOTOR
P40
GND
CTL
TO CTL HEAD
P41
LM-
LM+
TO LOADING MOTOR
P23
U
V-H
V-L
TU.PWR
GND
DUAL
STEREO
TO RF PCB CN23
P22
OFF
S.STEREO
HALL
DOLBY
VOL-DOWN
VOL-UP
Q.START
Q.START
P22A
TO OPERATION PCB P22
VS-A77 ONLY
VS-75 ONLY
*TR3, TR5, TR7
*R32, R33, R36:
VS-A77 ONLY
INDICATED VOLTAGE MEASURD IN P.B. MODE.
B (POWER SUPPLY) LINE
DM SPEED SIGNAL LINE
DM PHASE SIGNAL LINE
CM SPEED SIGNAL LINE
CM PHASE SIGNAL LINE
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF 50WV (J)
WARNING: ⚠ AND ▒ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS
AVERTISSMENT: ⚠ ET ▒, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT
SERVO/SYSCON PCB
SCHEMATIC DIAGRAM
NO.15-5 V108635M
5

PRINCIPAL PARTS LOCATION

ICS

IC1	B3,4
IC2	B,C2
IC3	D1
IC4	D2,3
IC5	D3,4
IC6	A,B1

CONECTORS

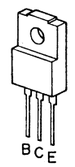
P22(P22A)	E2
P23	A3
P25	E3
P40	C3
P41	A4
P42	A3
P43	A3
P44	A,B3
P45	C3
P46	C4
P307(P307A)	B2

WIRES

J5(J5A)	B,C3
J12	A3,4
J15	A3
J21	A2,3
W14	A4
W24	B4

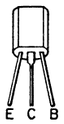
TRANSISTORS

TR1	B3
TR2	A4
TR3	B2
TR4	B2
TR5	C2
TR6	B2
TR7	B2
TR8	C2
TR9	A1
TR10	D1
TR11	C2
TR12	D3
TR13	A1
TR14	D3
TR15	D3
TR16	E2
TR17	E2,3
TR18	C4
TR19	D3
TR20	D4
TR21	D4
TR22	C3
TR23	C4
TR50	A1
TR51	A1
TR52	B2
TR53	C3
TR54	C3
TR55	E2



2SD1761

DTC124TS
2SA1317
2SC3330
DTA143ES
DTA144ES
DTA144TS
DTC124ES
DTC144ES
DTC144TS



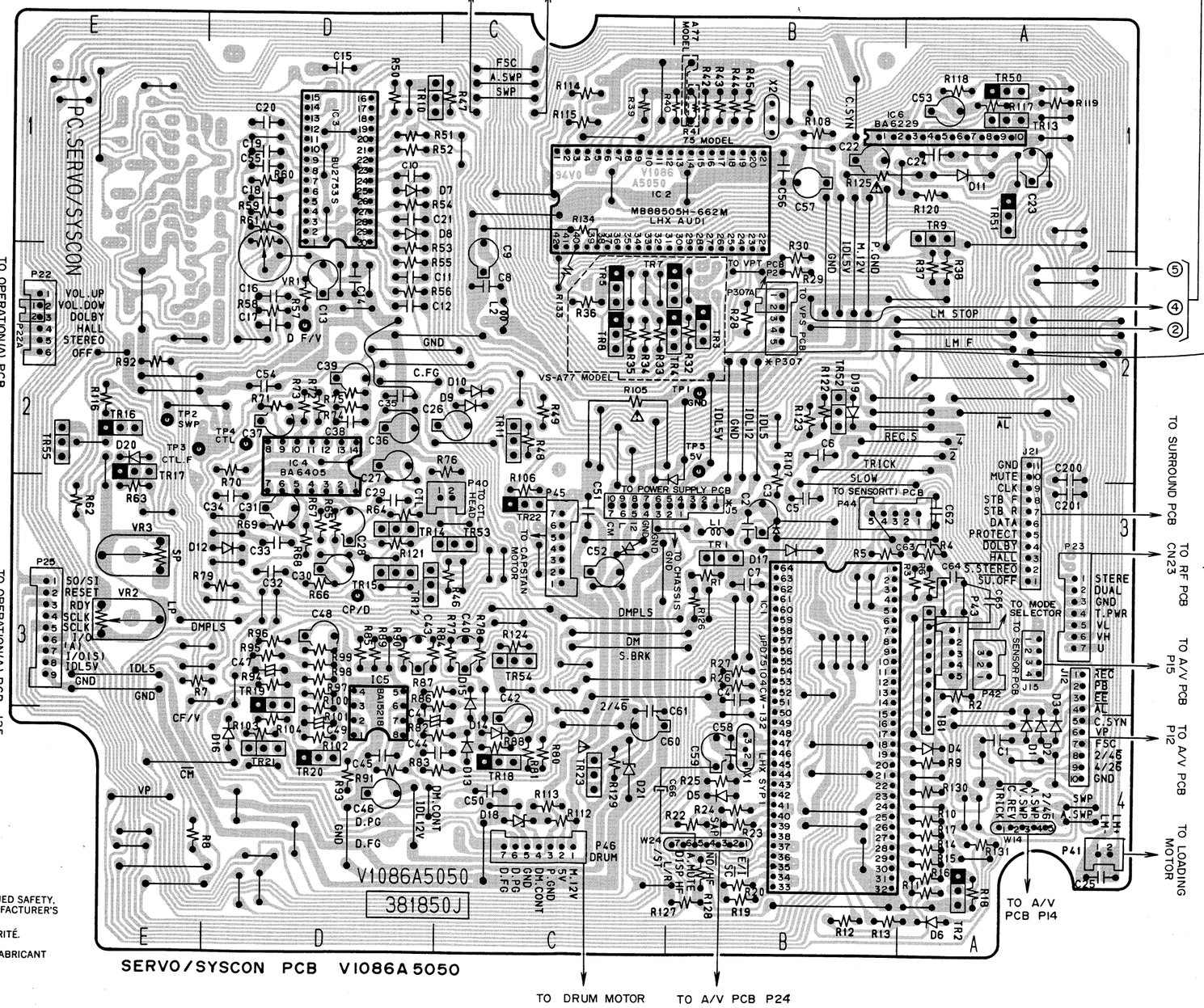
2SA1286

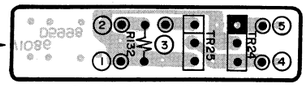
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

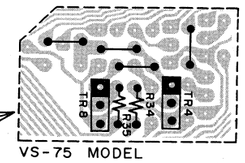
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

TO OPERATION(A) PCB J25

TO OPERATION(A) PCB
VS-A77 : P22-J22
VS-75 : P22A-J28







B PNP TRANSISTOR

B NPN TRANSISTOR

TO SURROUND PCB

TO RF PCB CN23

TO A/V PCB P15

TO A/V PCB P12

TO LOADING MOTOR

TO A/V PCB P14

*P307 : VS-A77 : 5P
VS-75 : 2P

*J5 VS-75 : 7P
VS-A77 : 10P

SERVO/SYSCON PCB V1086A5050

B (POWER SUPPLY) LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/10W(J)
ALL CAPACITORS IN μF 50WV(M)

RF PCB SCHEMATIC DIAGRAM

NO.15-6 V108637M

3

THE VALUE OF CHIP RESISTOR IS EXPRESSED AS FOLLOWING

A3 = 10 x 10^3 = 1K ohms
333 = 33 x 10^3 = 33K ohms

SYMBOL	BALUE
A	1.0
C	1.2
E	1.5
G	1.8
J	2.2
K	2.4
L	2.7
M	3.6
N	3.3
P	3.6
S	4.7
W	6.8
Y	8.2

CHIP TRANSISTOR

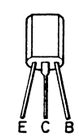
C
B E

LF : 2SC3052
MF : 2SA1235F
N1 : RTIN141C
N3 : RTIN441C
JC : 2SC2735
I6 : RTIP441C

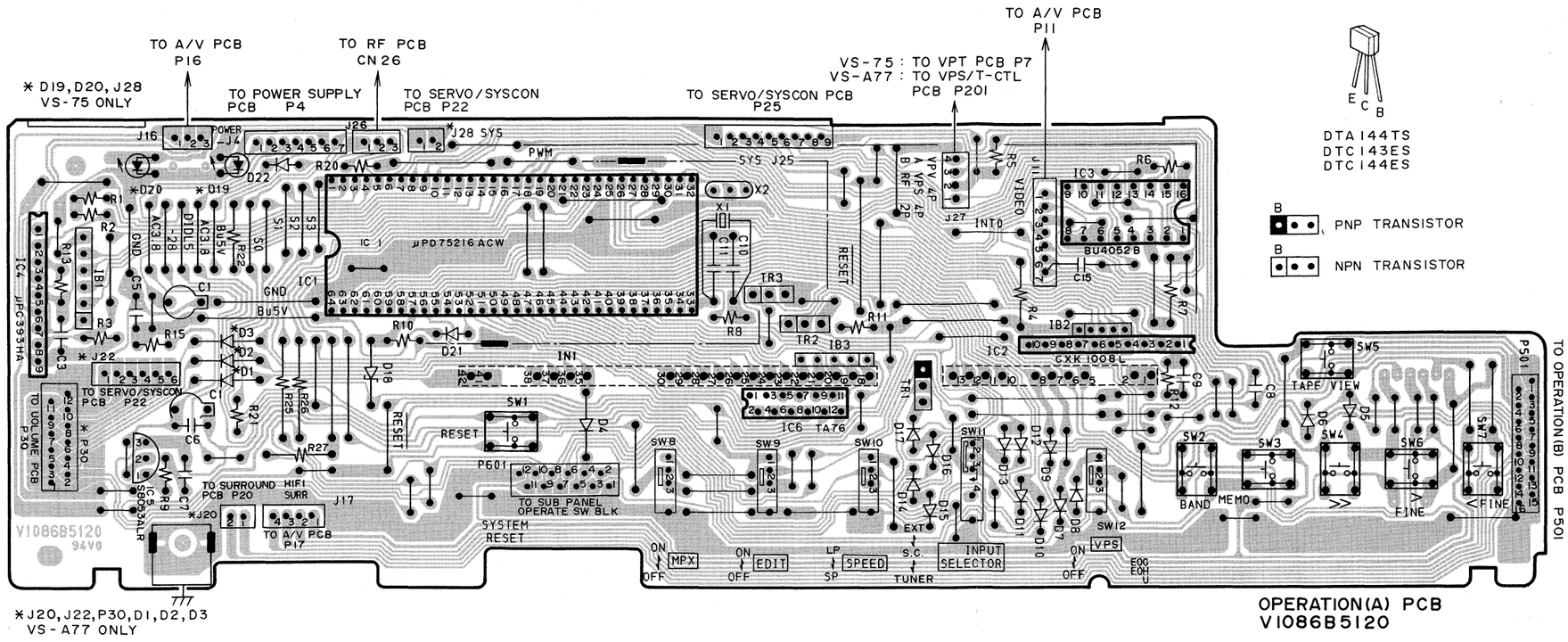
S D FET

B PNP TRANSISTOR

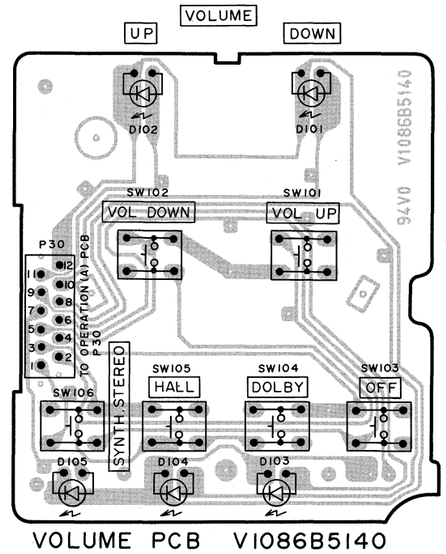
B NPN TRANSISTOR



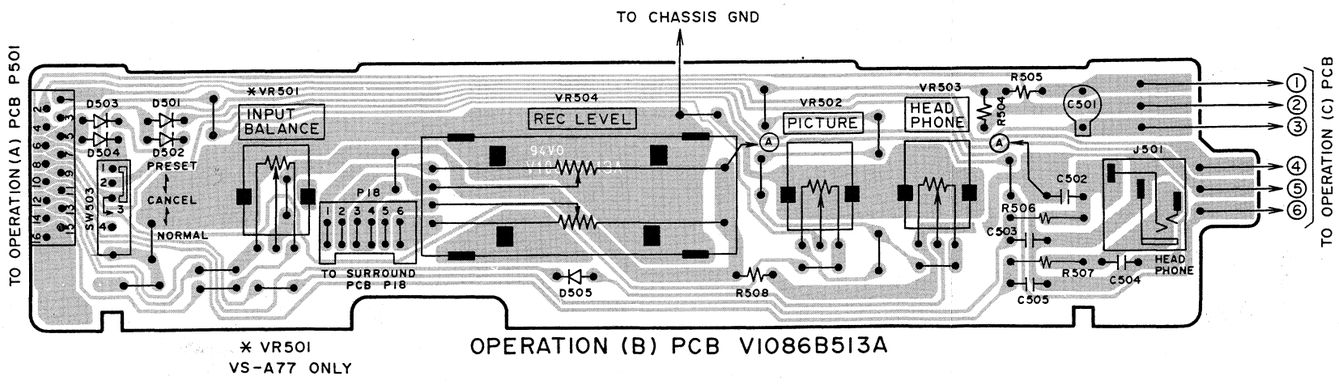
RF PCB 6A00196A1



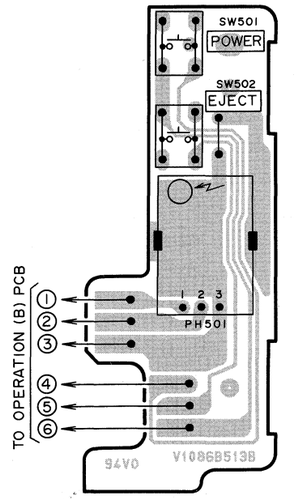
OPERATION(A) PCB V1086B5120



VOLUME PCB V1086B5140

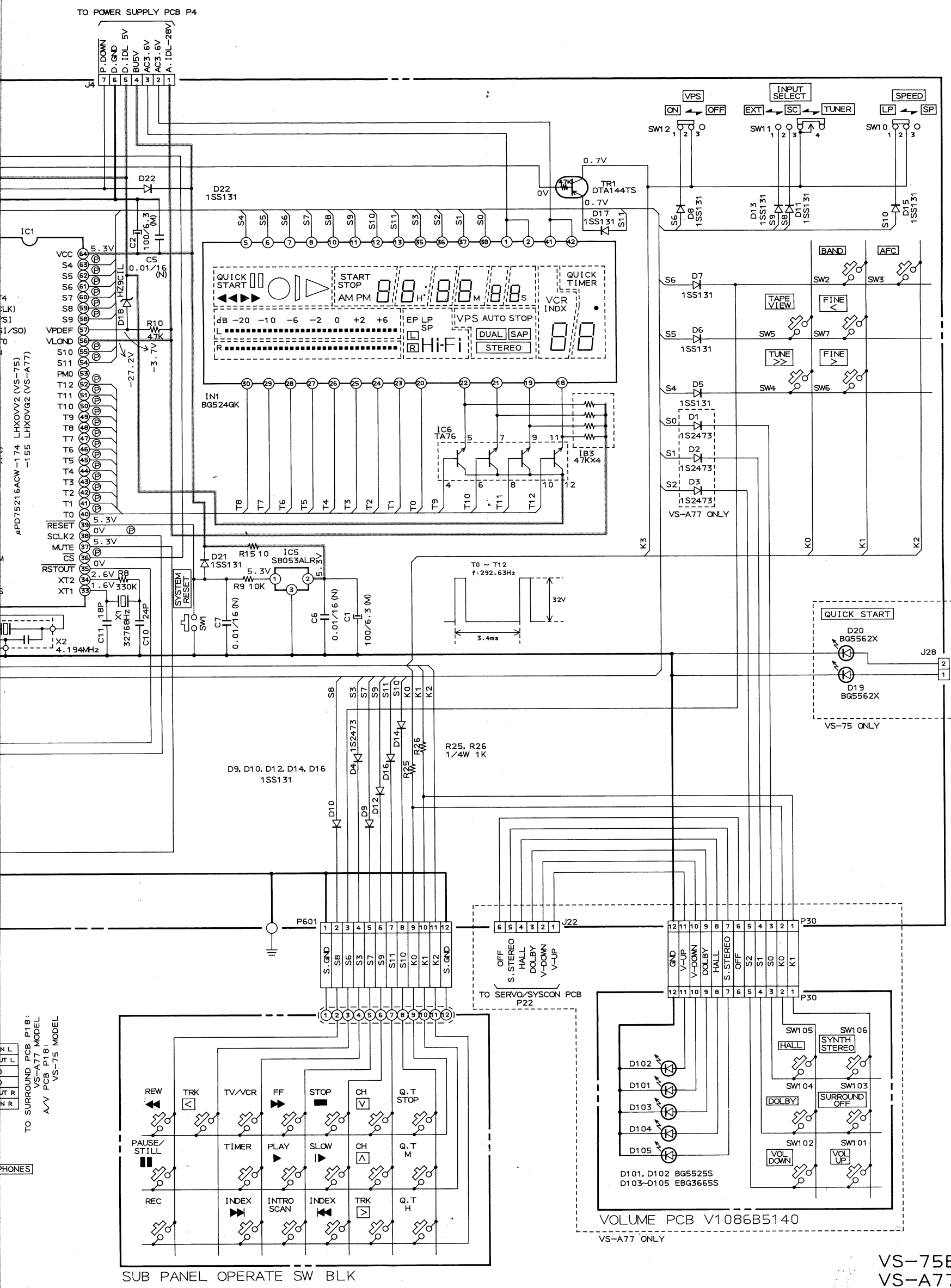


OPERATION (B) PCB V1086B513A



OPERATION(C) PCB V1086B513B

TO A/V PCB P16
LVL-L
LVL-R
MPX
J16
TO POWER SUPPLY PCB P4
P.DOWN
D.GND
D.IDL 5V
BUSV
AC3.6V
AC3.6V
A.IDL-28V
J4
TO A/V PCB P11
CLK (IMS)
SO/SI
GND
CS
RESET
EDIT
PIC.CTL
J11
VS-75: TO VPT PCB P7
VS-A77: TO VPS/T-CTL PCB P201
RESET
SI/SO (VPS)
SO/SI
SCLK (VPS)
J27
TO SERVO/SYSCON PCB P25
SO/SI
RESET
R/B
CLK (AU)
CLK (SYS)
SI/SO (AU)
SI/SO (SYS)
IDL 5V
GND
J25
TO RF PCB CN26
AFC DEF
A.MUTE
PWM
J26
VS-A77 ONLY
TO SURROUND PCB P20
INPUT BAL R
INPUT BAL L
J20
TO A/V PCB P17
HP.L CH
HP.VOL
HP.R CH
GND
J17
SW8
SW9
ON
MPX
EDIT
OFF
IC1
IC2 CXK1008L
IC3 BU4052B
IC4 µPC393HA
IB1 RKM 6L502F
IB2 22K×4
µPD75216ACW-174 (VS-75)
-155 LHXOVV2 (VS-75)
-174 LHXOVG2 (VS-A77)
TR2 DTC144ES
TR3 DTC143ES
D22 1SS131
D21 1SS131
D18 HZ9CIL
IN1 BG524GK
SYSTEM RESET
SW1
X1 32768Hz
X2 4.194MHz
R1 10K
R2 10K
R3 10K
R4 1/4W 10K
R5 10K
R6 10K
R7 1/4W 4.7K
R8 330K
R9 1
R10 47K
R11 10K
R12 150K
R13 3.9K
R20 1K
R21 2.2K
R22 1/4W 2.2K
R27 1/4W 1K
C1 100/6.3 (M)
C2 100/6.3 (M)
C3 0.01/16 (N)
C5 0.01/16 (N)
C7 0.01/16 (N)
C8 0.001 (K)
C9 0.47
C10 24P
C11 18P
C15 0.01/16 (N)
P501
OPERATION (A) PCB
V1086B5120
OPERATION (C) PCB
V1086B513B
OPERATION (B) PCB V1086B513A
LIMITER
BPF
DEM OD
COMP
PH501 AIQH3011H0
C501 100/6.3
R504 22K
R505 4.7
SURROUND INPUT BALANCE
VS-A77 ONLY
*VR501 20K
VR504 5K×2
P18
REC.V.IN L
REC.V.OUT L
GND
GND
REC.V.OUT R
REC.V.IN R
TO SURROUND PCB P18: VS-A77 MODEL
A/V PCB P18: VS-75 MODEL
REC LEVEL
Lch
Rch
R508 510
VR503 2K
PHONES LEVEL
C504 0.022/25 (Z)
C505 100P
R507 4.7
C503 100P
R506 4.7
C502 0.022/25 (Z)
PHONES
J501
D503 1SS131
D501 1SS131
D504 1SS131
D502 1SS131
D505 1SS131
SW502 EJECT
SW501 POWER
SW503
VR502 10K
PICTURE
PRESET
CANCEL
NORMAL
SUB PANEL OPER
REW
TRK
TV/VC
PAUSE/ STILL
TIMER
REC
INDEX
INDICATED VOLTAGE M
B (POW



INDICATED VOLTAGE MEASURD IN P.B. MODE.

B (POWER SUPPRY) LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)

VS-75EOG
VS-A77EOG
OPERATION (A) (B) (C) & VOLUME PCB SCHEMATIC DIAGRAM

NO.15-7 V108636M 3

SURROUND PCB V1086B503A

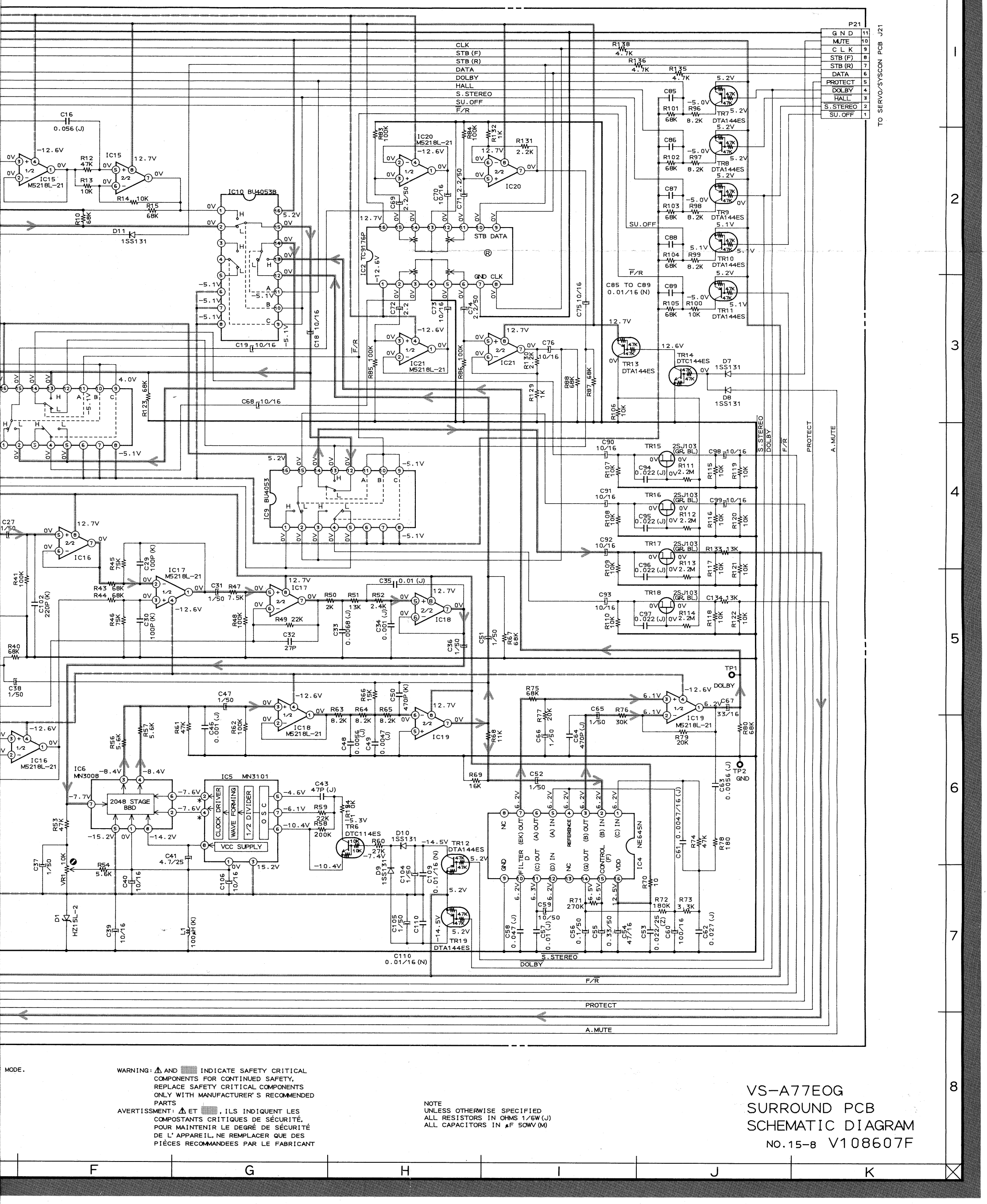
INDICATED VOLTAGE MEASURED IN P.B & SURROUND OFF MODE.

+B (POWER SUPPLY) LINE

−B (POWER SUPPLY) LINE

Lch SIGNAL LINE

WARNING: ⚠ AND
COMPONENTS
REPLACE SA
ONLY WITH
PARTS
AVERTISSMENT: ⚠ ET
COMPOSTANT
POUR MAINT
DE L' APPAR
PIÈCES REC



MODE.

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (M)

VS-A77EOG
SURROUND PCB
SCHEMATIC DIAGRAM
NO.15-8 V108607F

PRINCIPAL PARTS LOCATION

ICS

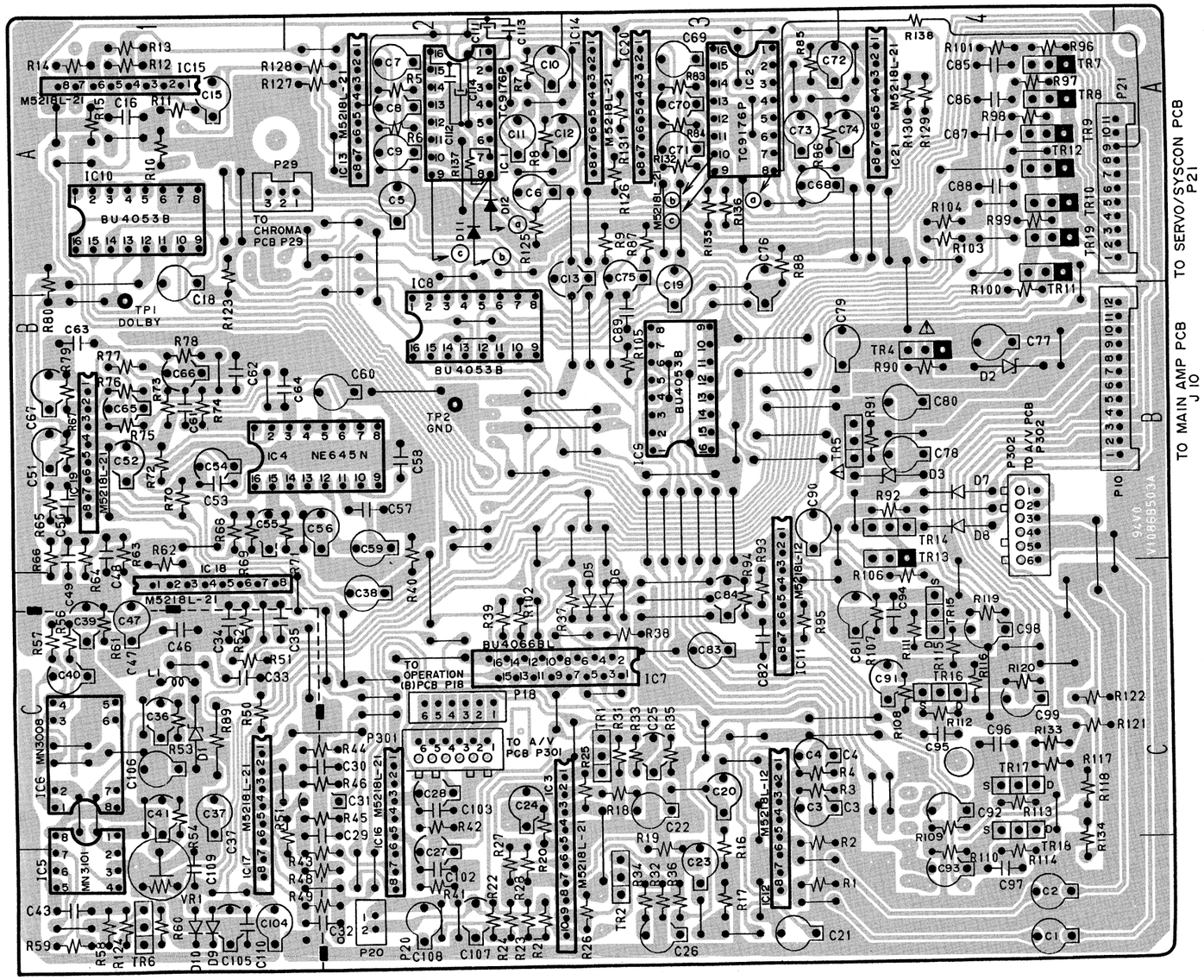
IC1	A2
IC2	A3
IC3	C,D3
IC4	B1,2
IC5	C,D1
IC6	C1
IC7	C2,3
IC8	B2
IC9	B3
IC10	A1
IC11	B,C3
IC12	C,D3
IC13	A2
IC14	A3
IC15	A1
IC16	C,D2
IC17	C,D1
IC18	C1
IC19	B1
IC20	A3
IC21	A4

TRANSISTORS

TR1	C3
TR2	D3
TR4	B4
TR5	B4
TR6	D1
TR7	A4
TR8	A4
TR9	A4
TR10	A4
TR11	A4
TR12	A4
TR13	B4
TR14	B4
TR15	C4
TR16	C4
TR17	C4
TR18	C4
TR19	A4

CONNECTORS

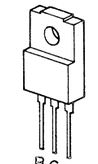
P10	B4
P18	C2
P20	D2
P21	A4
P29	A1,2
P301	C2
P302	B,C4



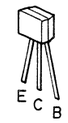
SURROUND PCB V1086B503A

2SJ103

2SC3383

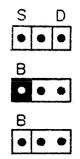


2SB945
2SD1273



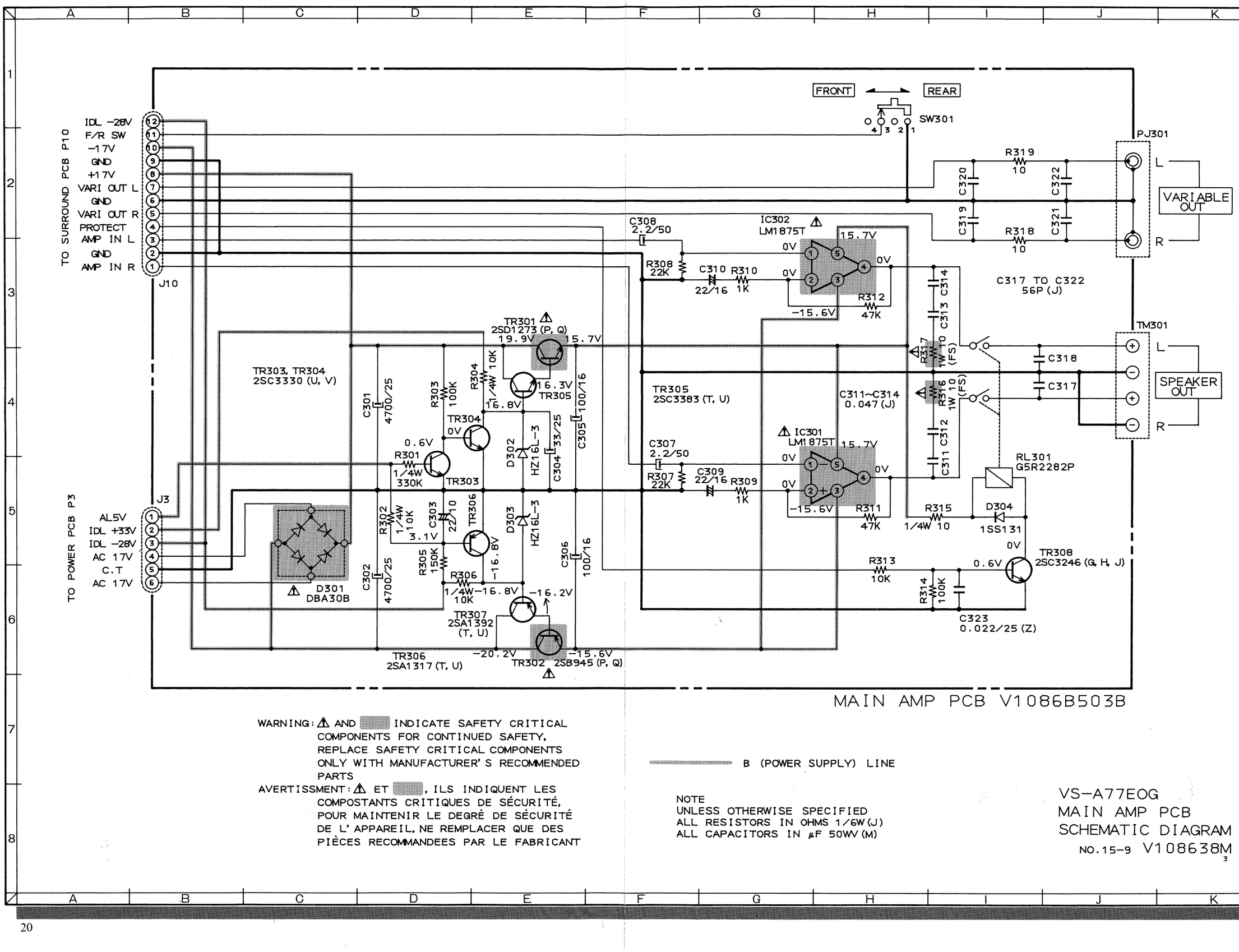
DTA144ES
DTC144ES

TR1,2	2SC3383
TR4	2SB945
TR5	2SD1273
TR6,14	DTC144ES
TR7,8,9,10,11,12,13,19	DTA144ES
TR15,16,17,18	2SJ103



WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



MAIN AMP PCB V1086B503B

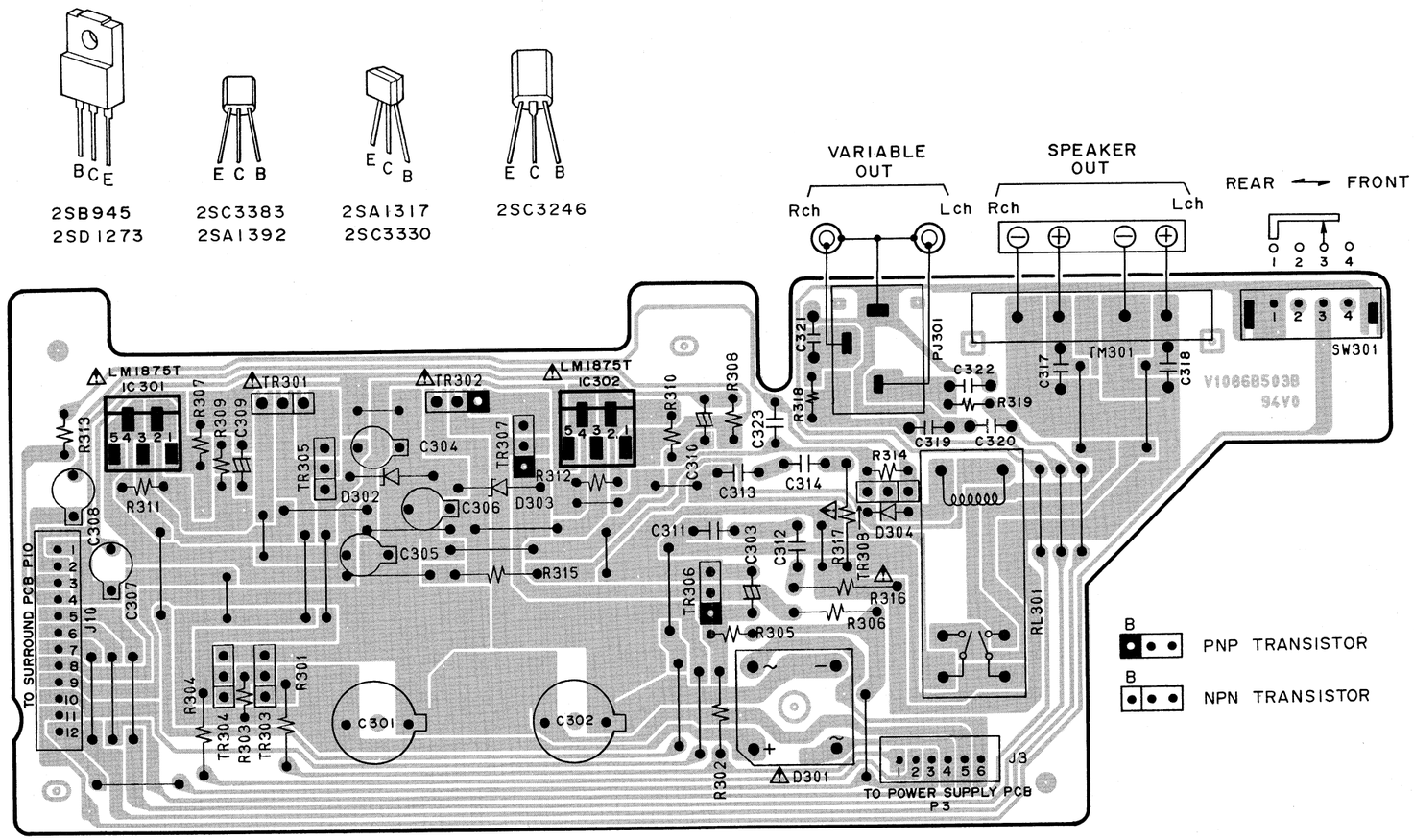
WARNING: ⚠ AND ▭ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▭, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

B (POWER SUPPLY) LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50WV (M)

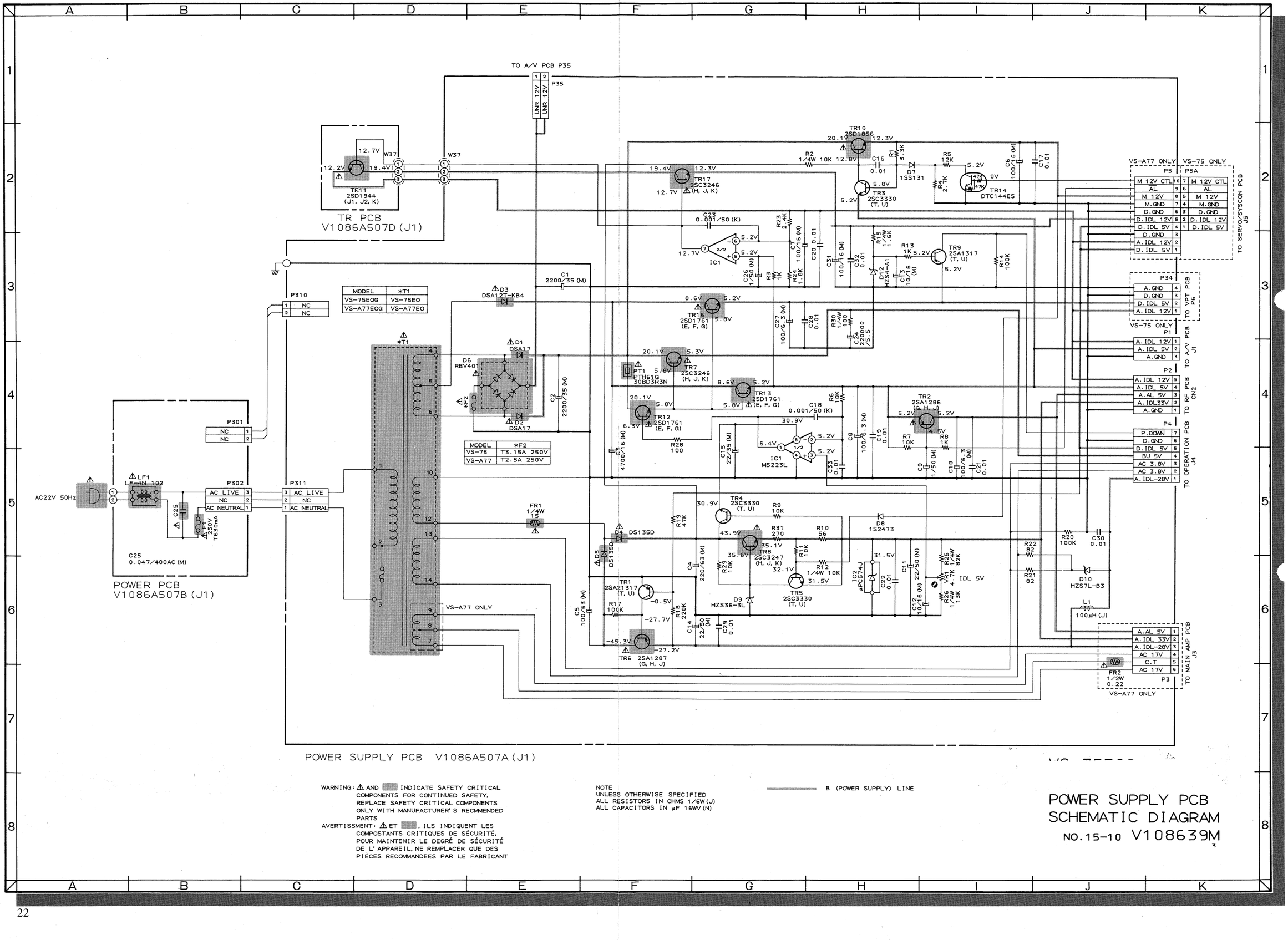
VS-A77EOG
MAIN AMP PCB
SCHEMATIC DIAGRAM
NO.15-9 V108638M 3



MAIN AMP PCB V1086B503B

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



WARNING: ⚠ AND ▭ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECMMENDED PARTS

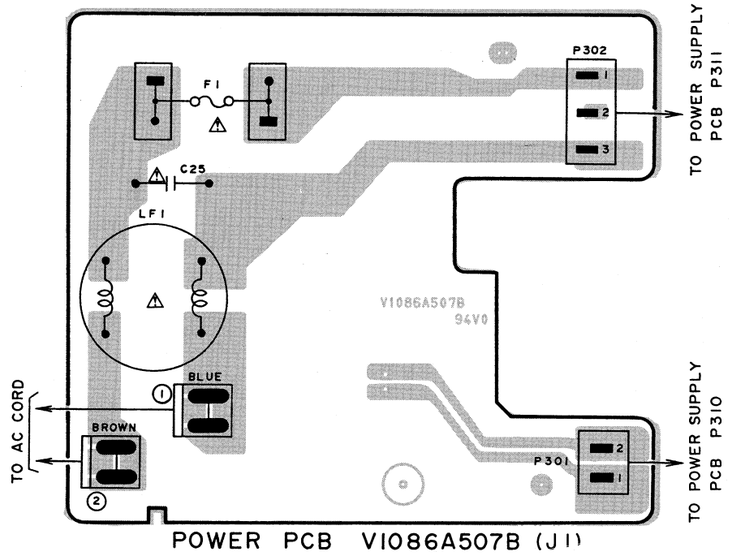
AVERTISSMENT: ⚠ ET ▭, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 16WV (N)

B (POWER SUPPLY) LINE

POWER SUPPLY PCB SCHEMATIC DIAGRAM

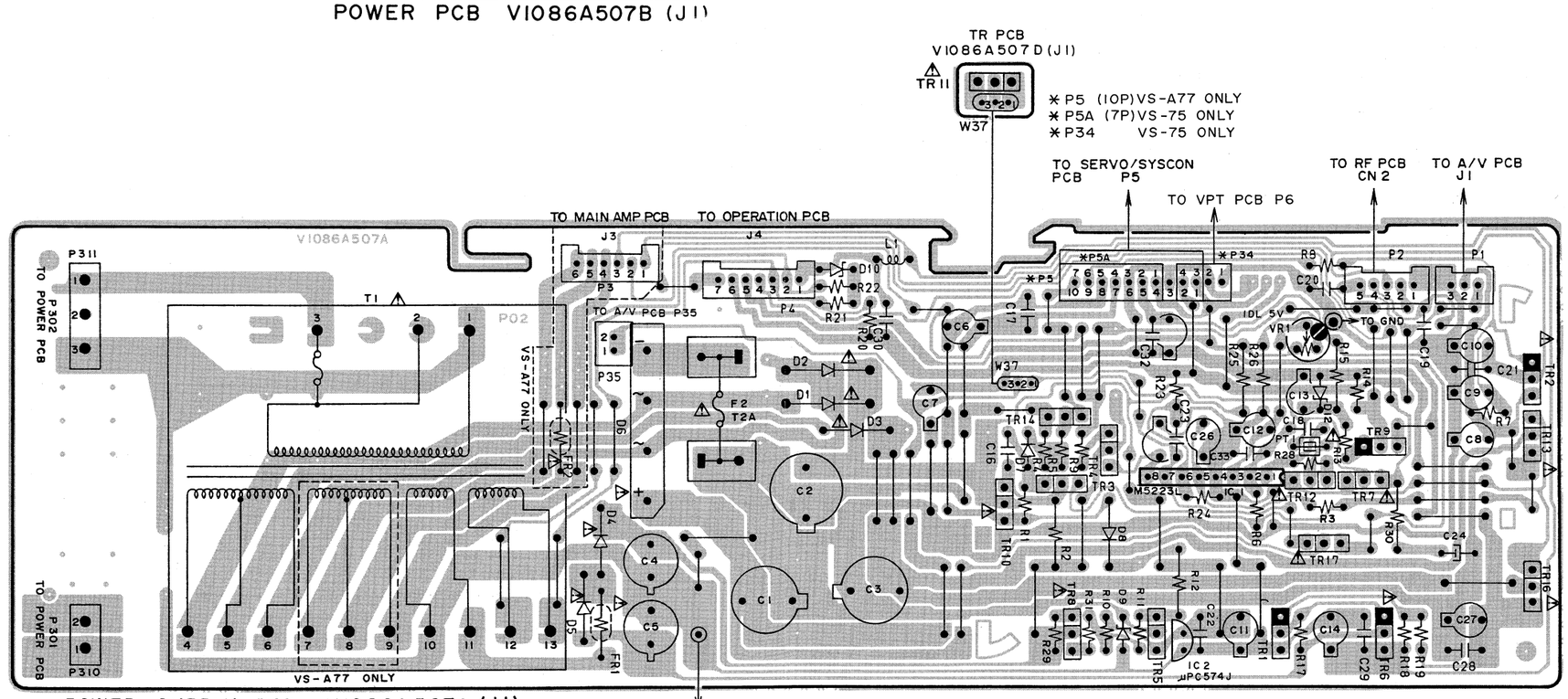
NO.15-10 V108639M 3



POWER PCB V1086A507B (J1)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT



POWER SUPPLY PCB V1086A507A (J1)

B PNP TRANSISTOR

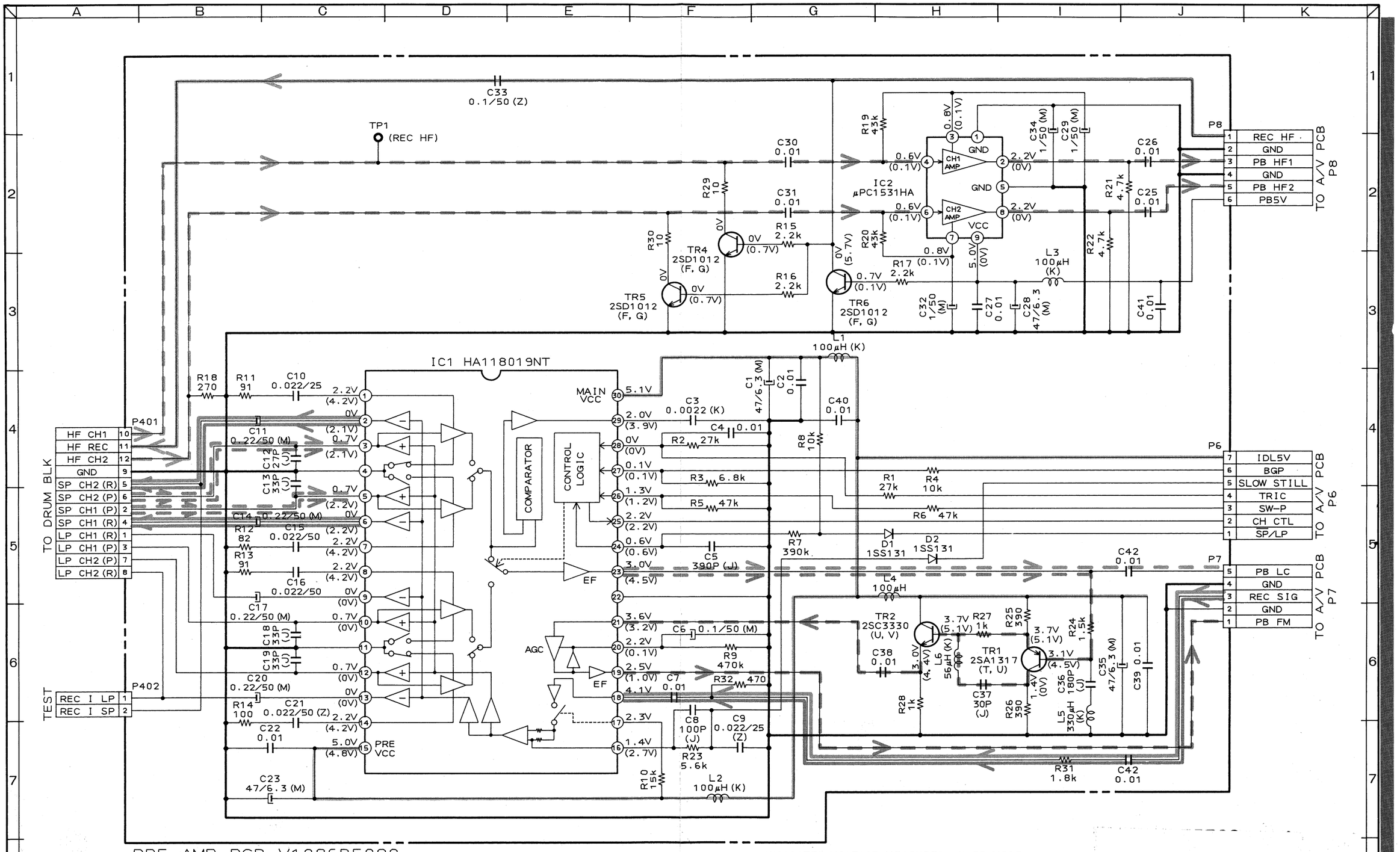
B NPN TRANSISTOR

E C B — 2SA1317, 2SC3330, DTC144ES

E C B — 2SA1286, 2SA1287, 2SC3246, 2SC3247

B C E — 2SD1761, 2SD1944

TR1	2SA1317
TR2	2SA1286
TR3,4,5	2SC3330
TR6	2SA1287
TR7, 17	2SC3246
TR8	2SC3247
TR9	2SA1317
TR10	2SD1944
TR12,13,16	2SD1761
TR14	DTC144ES



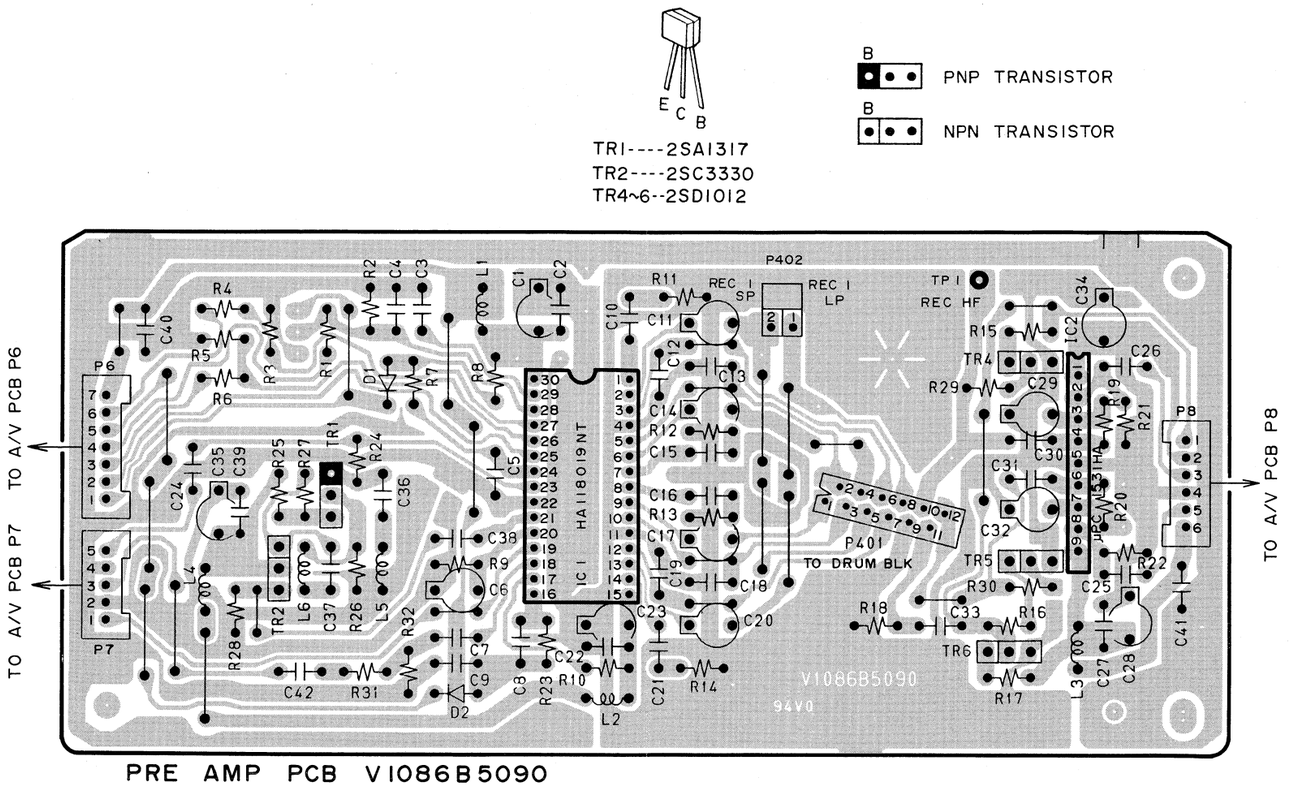
PRE AMP PCB V1086B5090

B (POWER SUPPLY) LINE
HIFI AUDIO REC SIGNAL
HIFI AUDIO PB SIGNAL
CHROMA REC SIGNAL LINE
CHROMA PB SIGNAL LINE
Y.REC SIGNAL LINE
Y.PB SIGNAL LINE

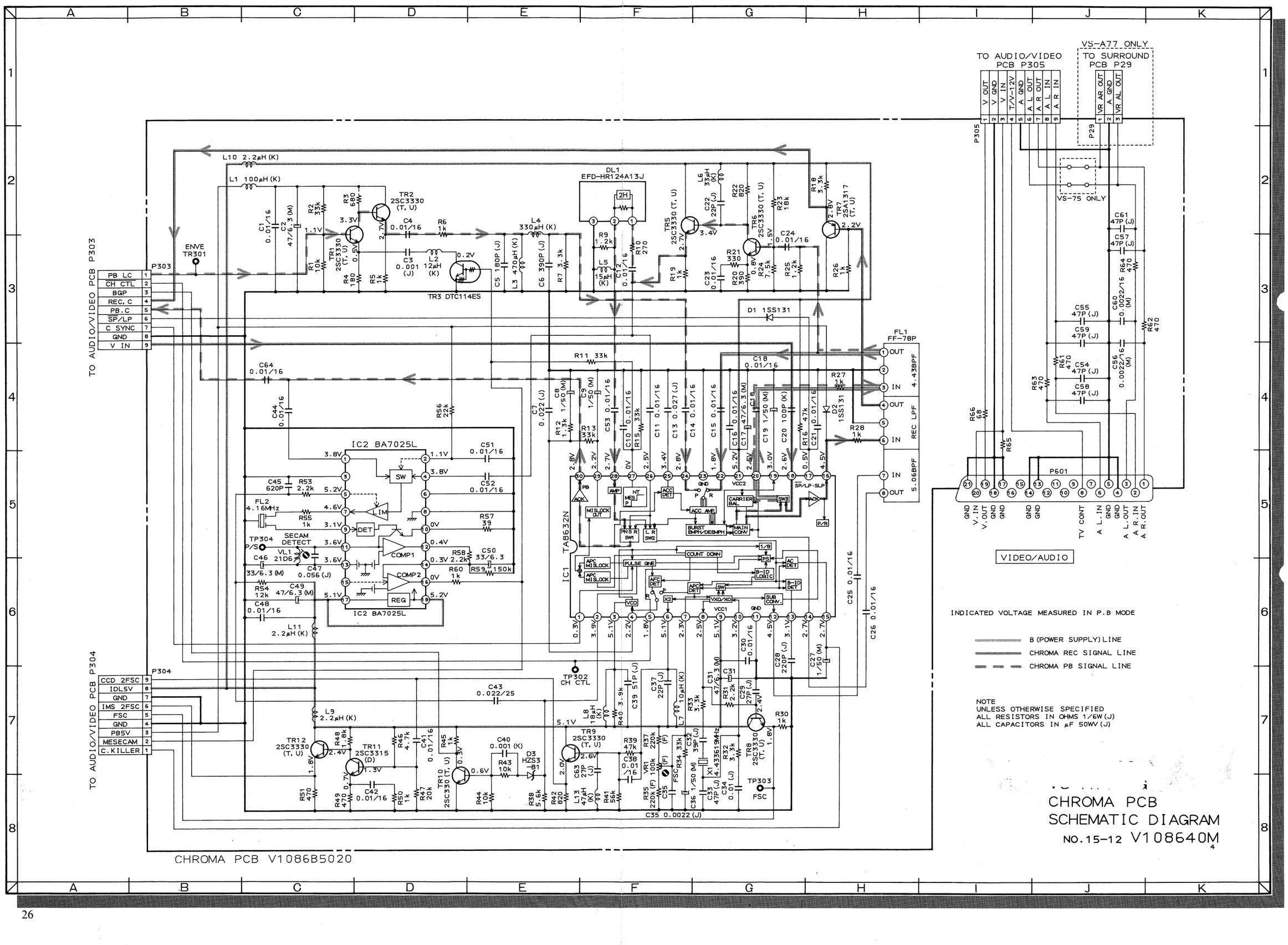
INDICATED VOLTAGE MEASURED IN PB MODE.
( ) : REC MODE

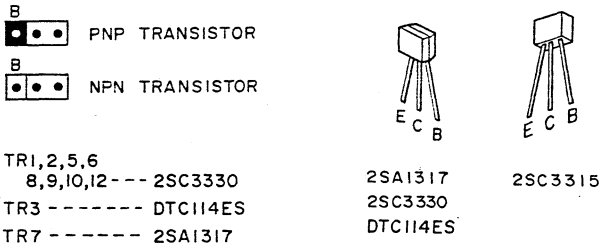
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 16WV (N)

PRE AMP PCB
SCHEMATIC DIAGRAM
NO.15-11 V108611F



PRE AMP PCB V1086B5090

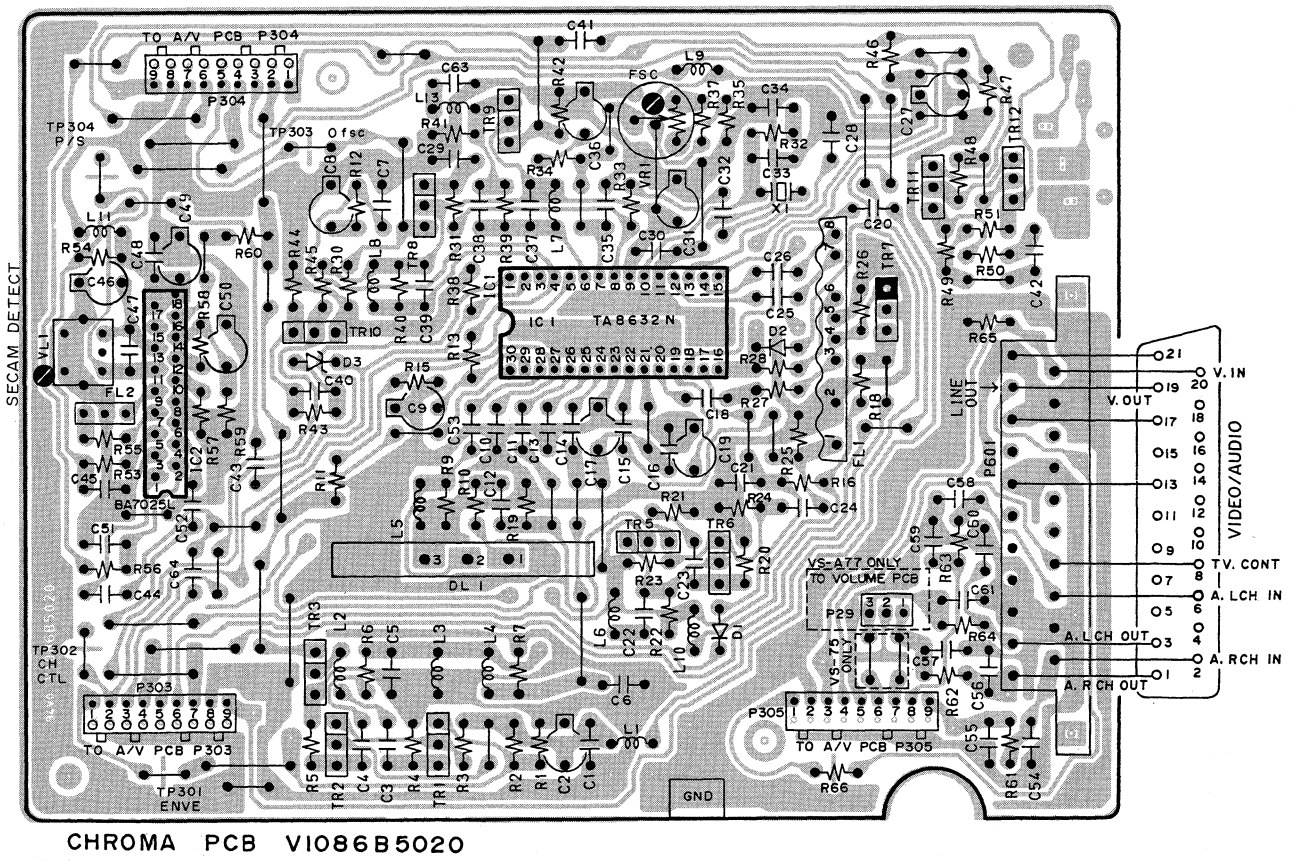

TO AUDIO/VIDEO PCB P305
VS-A77 ONLY
TO SURROUND PCB P29
VS-75 ONLY
TO AUDIO/VIDEO PCB P303
TO AUDIO/VIDEO PCB P304
VIDEO/AUDIO
INDICATED VOLTAGE MEASURED IN P.B MODE
B (POWER SUPPLY) LINE
CHROMA REC SIGNAL LINE
CHROMA PB SIGNAL LINE
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF 50WV (J)
CHROMA PCB
SCHEMATIC DIAGRAM
NO.15-12 V108640M
CHROMA PCB V1086B5020



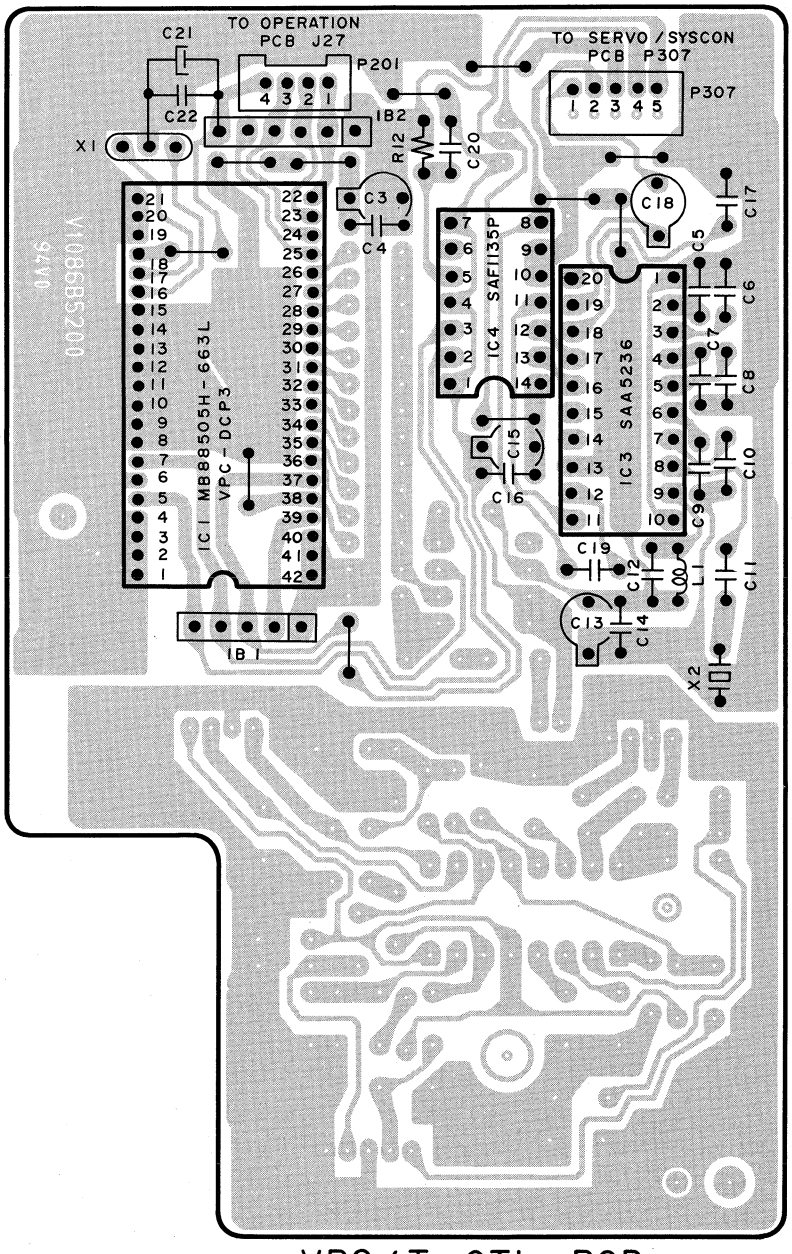
TR1,2,5,6
8,9,10,12 --- 2SC3330
TR3 ------- DTC114ES
TR7 ------ 2SA1317
TR11 ------ 2SC3315

2SA1317
2SC3330
DTC114ES

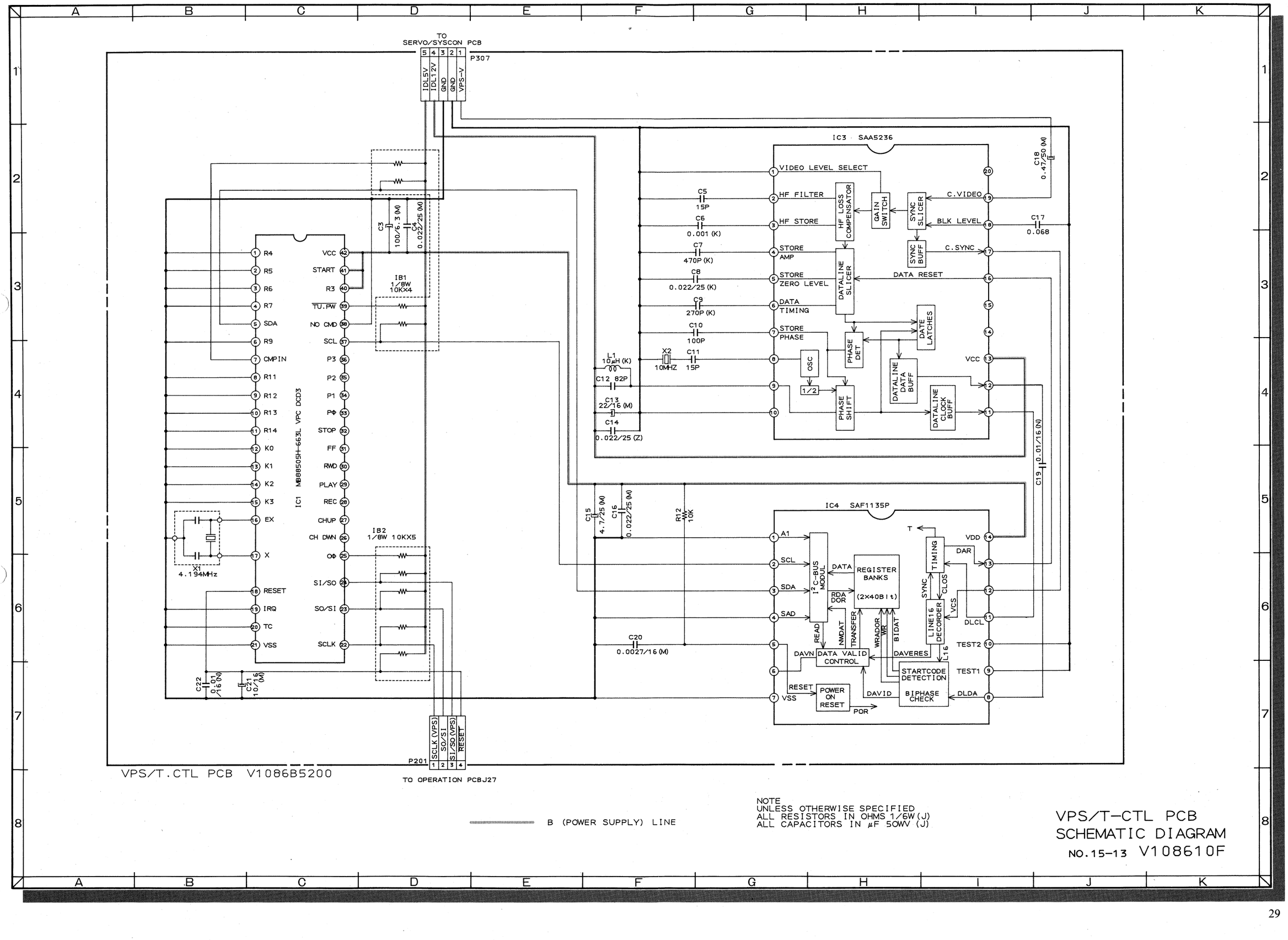
2SC3315



CHROMA PCB V1086B5020



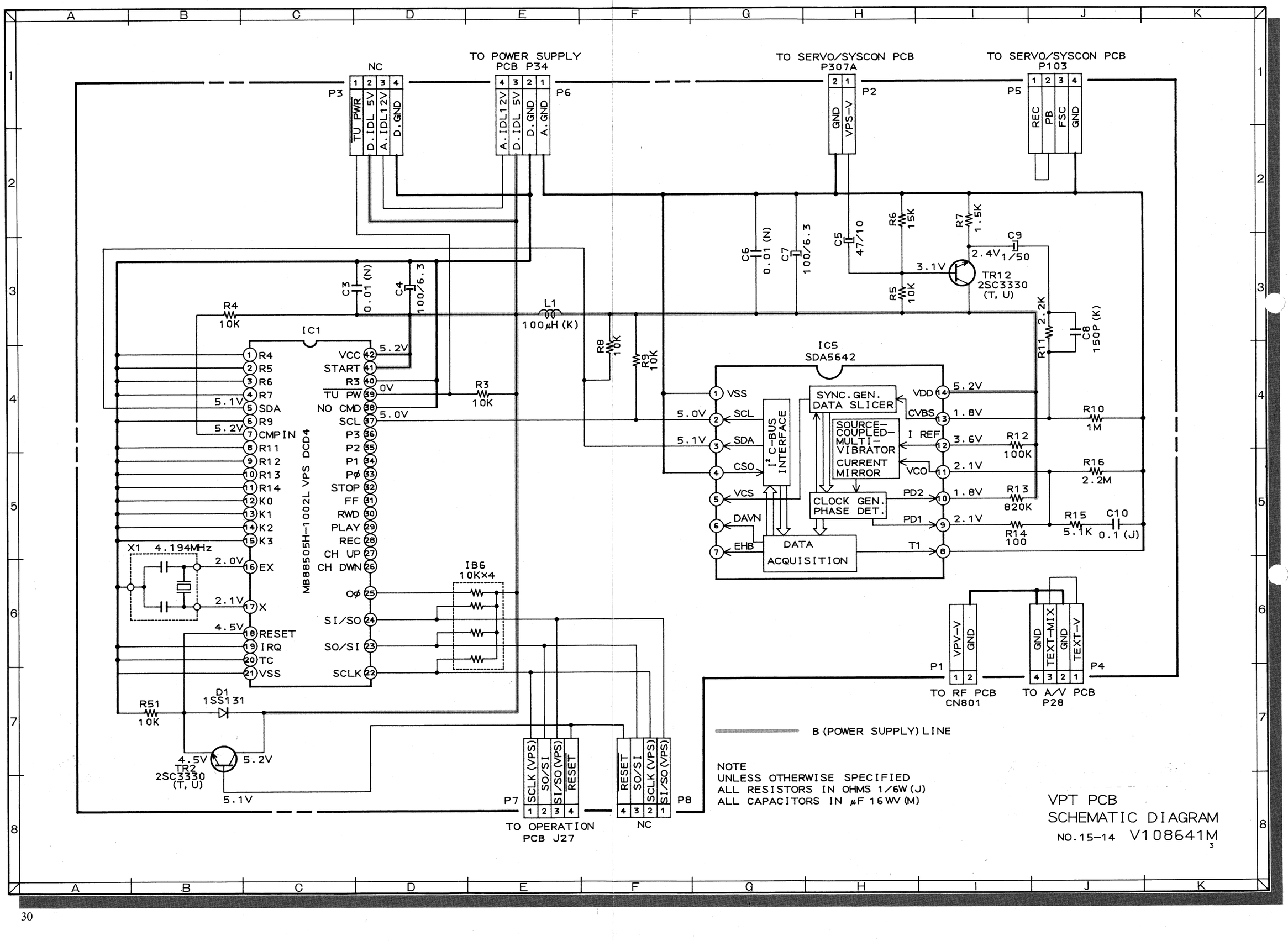
VPS / T-CTL PCB
V1086B5200

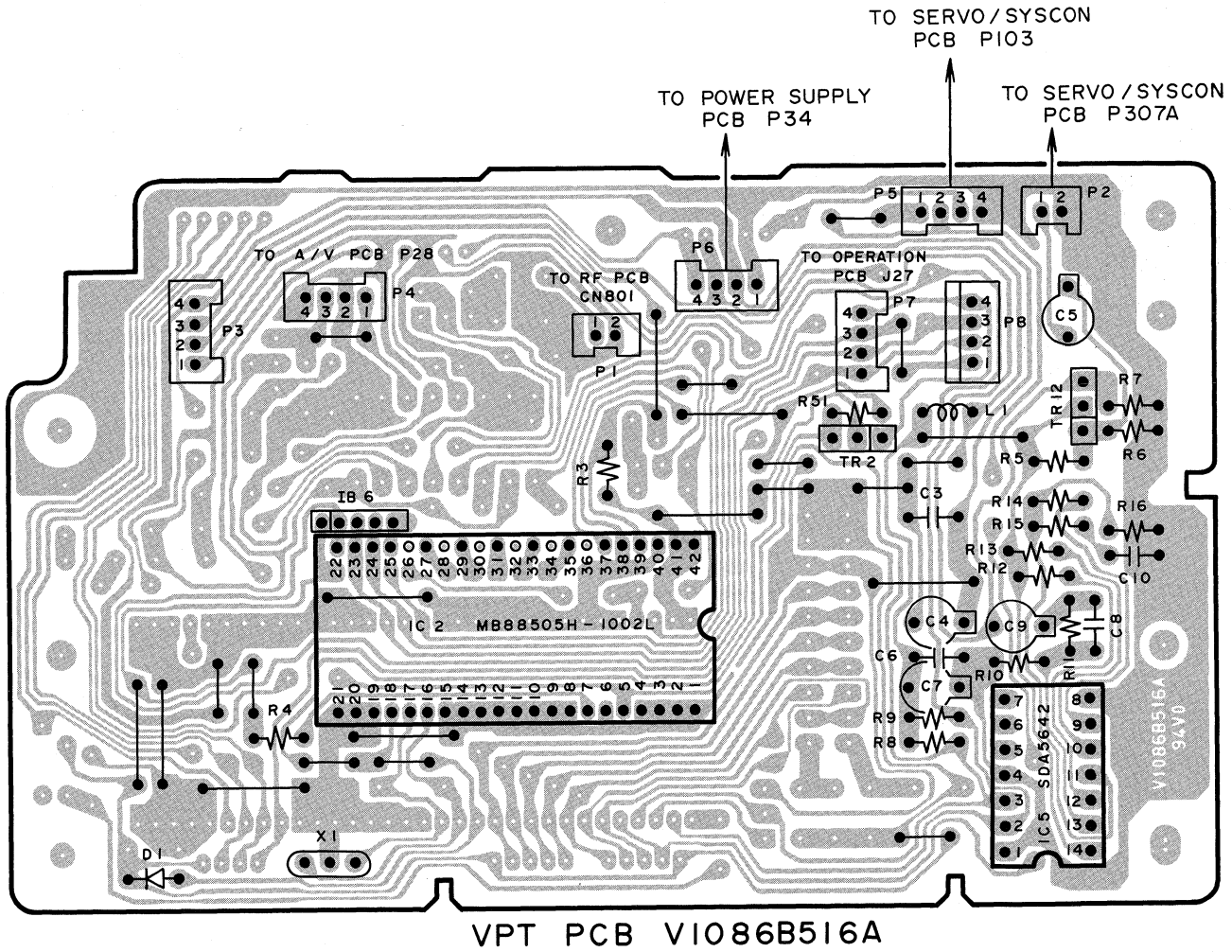


NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV (J)

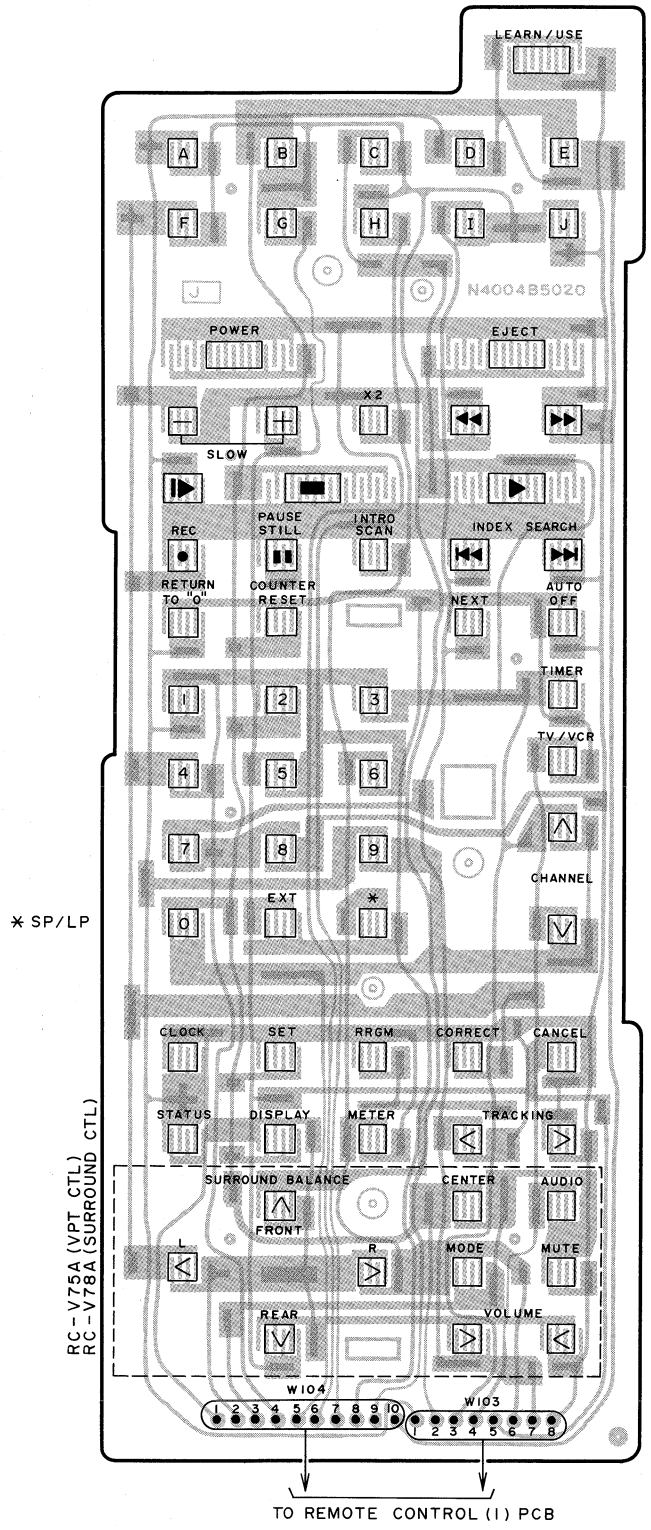
VPS/T-CTL PCB SCHEMATIC DIAGRAM

NO.15-13 V108610F

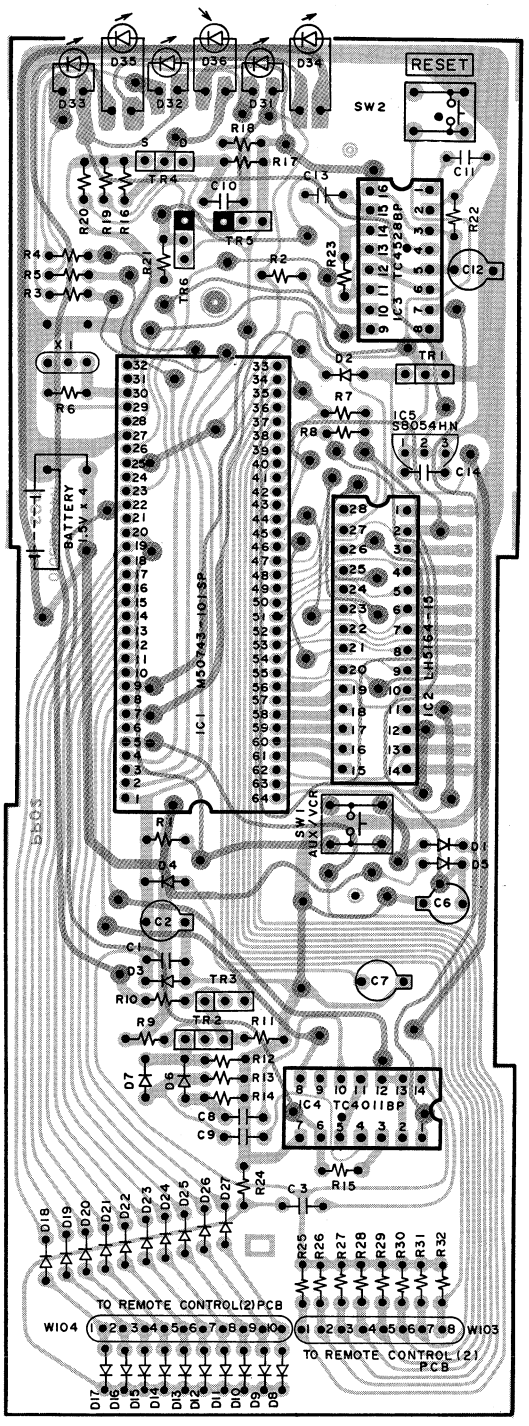

TO POWER SUPPLY PCB P34
NC
TO SERVO/SYSCON PCB P307A
TO SERVO/SYSCON PCB P103
P3
TU PWR
D.IDL 5V
A.IDL12V
D.GND
P6
A.IDL12V
D.IDL 5V
D.GND
A.GND
P2
GND
VPS-V
P5
REC
PB
FSC
GND
C3 0.01 (N)
C4 100/6.3
C6 0.01 (N)
C7 100/6.3
C5 47/10
R6 15K
R7 1.5K
C9 2.4V 1/50
3.1V
TR12 2SC3330 (T, U)
R5 10K
R4 10K
L1 100μH (K)
R8 10K
R9 10K
R11 2.2K
C8 150P (K)
IC1
MB88505H-1002L VPS DCD4
R4
R5
R6
R7
SDA
R9
CMPIN
R11
R12
R13
R14
K0
K1
K2
K3
EX
X
RESET
IRQ
TC
VSS
VCC 5.2V
START
R3 0V
TU PW
NO CMD
SCL 5.0V
P3
P2
P1
PΦ
STOP
FF
RWD
PLAY
REC
CH UP
CH DWN
OΦ
SI/SO
SO/SI
SCLK
5.1V
2.0V
2.1V
4.5V
X1 4.194MHz
R3 10K
IB6 10K×4
IC5 SDA5642
VSS
SCL
SDA
CS0
VCS
DAVN
EHB
I²C-BUS INTERFACE
DATA ACQUISITION
SYNC. GEN. DATA SLICER
SOURCE-COUPLED-MULTI-VIBRATOR
CURRENT MIRROR
CLOCK GEN. PHASE DET.
VDD 5.2V
CVBS 1.8V
I REF 3.6V
VCO 2.1V
PD2 1.8V
PD1 2.1V
T1
R10 1M
R12 100K
R16 2.2M
R13 820K
R14 100
R15 5.1K
C10 0.1 (J)
R51 10K
D1 1SS131
TR2 2SC3330 (T, U)
4.5V
5.2V
5.1V
P7
SCLK (VPS)
SO/SI
SI/SO (VPS)
RESET
TO OPERATION PCB J27
P8
RESET
SO/SI
SCLK (VPS)
SI/SO (VPS)
NC
P1
VPV-V
GND
TO RF PCB CN801
P4
GND
TEXT-MIX
GND
TEXT-V
TO A/V PCB P28
B (POWER SUPPLY) LINE
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 16WV (M)
VPT PCB
SCHEMATIC DIAGRAM
NO.15-14 V108641M3



VPT PCB V1086B516A



REMOTE CONTROL (2) PCB
N4004B5020

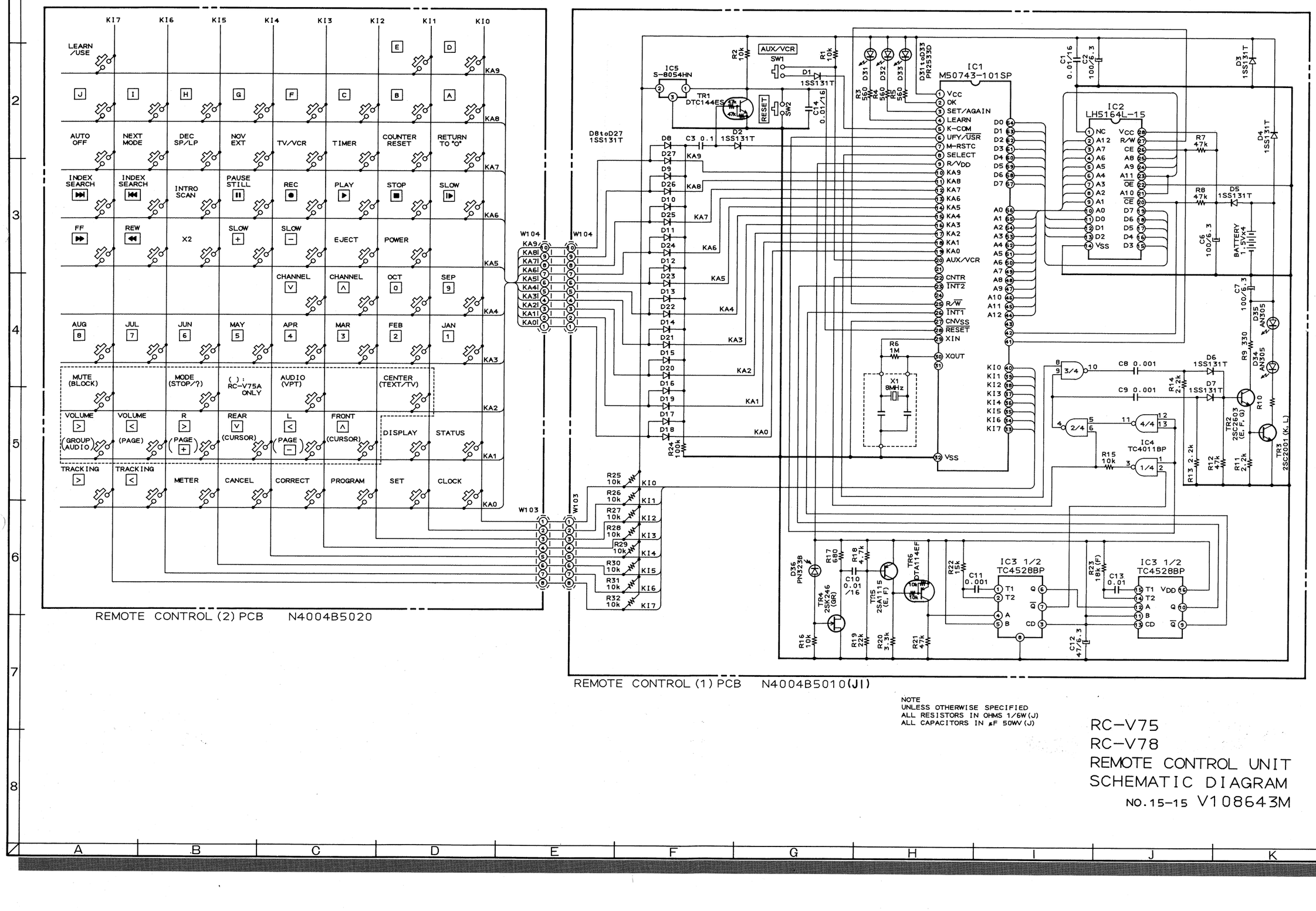


REMOTE CONTROL (1) PCB
N4004B5010(J1)

S D
FET

B
PNP TRANSISTOR

B
NPN TRANSISTOR

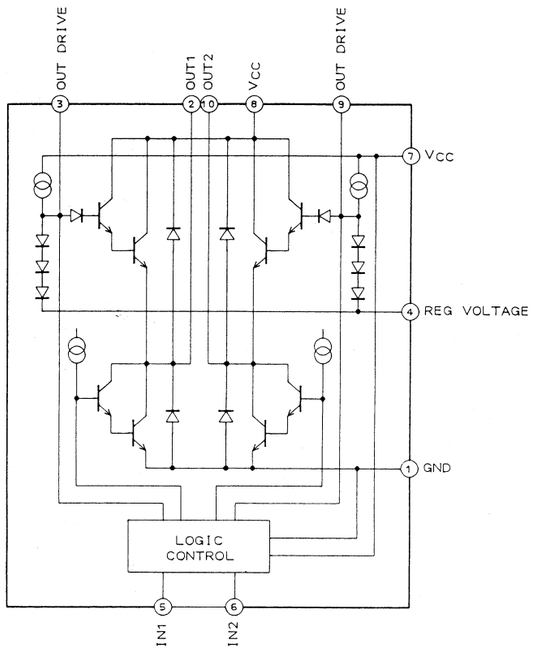


NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)

RC-V75
RC-V78
REMOTE CONTROL UNIT SCHEMATIC DIAGRAM

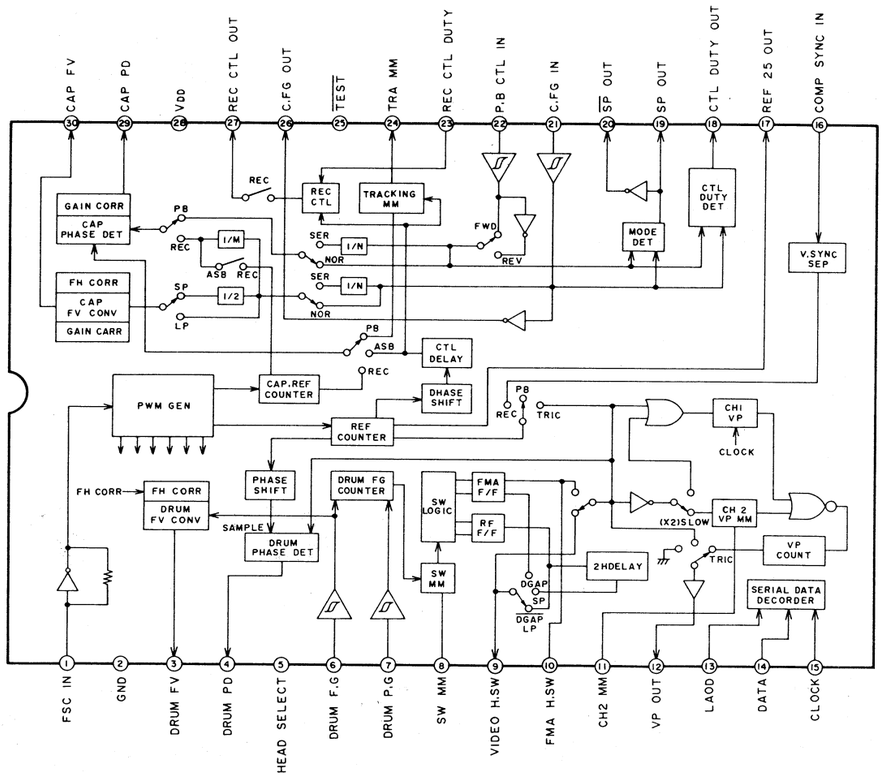
NO.15-15 V108643M

BA6229 (BI-DIRECTIONAL MOTOR DRIVER)

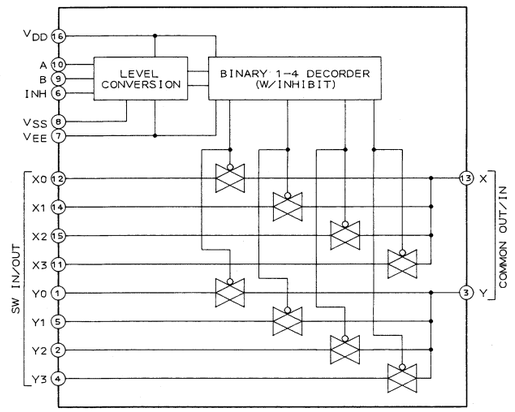


INPUT		OUTPUT		MODE
⑤	⑥	②	⑩	
H	H	L	L	BRAKE
L	H	L	H	CASSETTE & TAPE LOADING
H	L	H	L	CASSETTE & TAPE UNLOADING
L	L	OPEN	OPEN	STOP

BU2753S (DIGITAL SERVO)



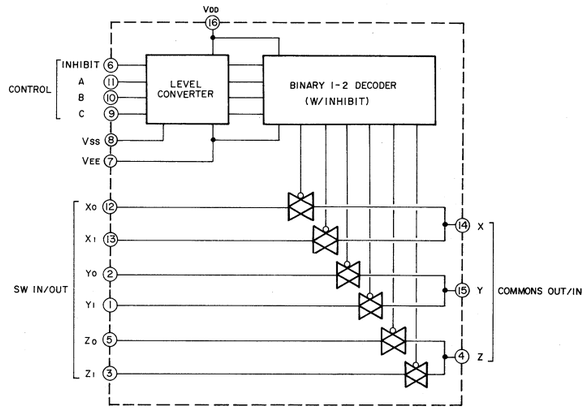
BU4052B (DUAL 4CH. MULTIPLEXER/DEMULTIPLEXER)



TRUTH TABLE

CONTROL DATE			"ON" CHANNEL	
INH	A	B	X	Y
L	L	L	X0	Y0
L	H	L	X1	Y1
L	L	H	X2	Y2
L	H	H	X3	Y3
H	*	*	NONE	

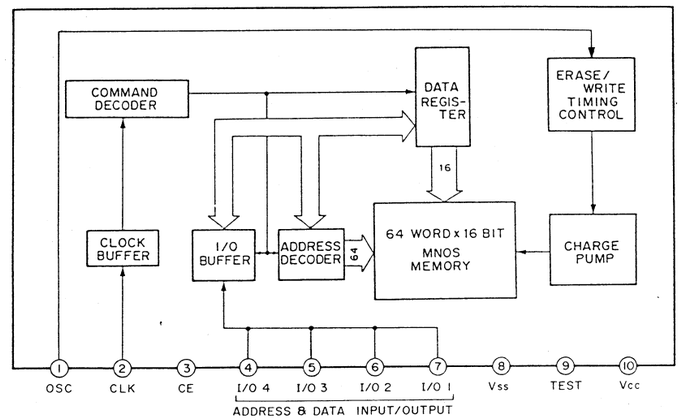
BU4053B (TRIPLE 2CH. MULTIPLEXER/DEMULTIPLEXER)



TRUTH TABLE

CONTROL DATE				"ON" CHANNEL		
INH	A	B	C	X	Y	Z
L	L	L	L	X_0	Y_0	Z_0
L	L	L	H	X_0	Y_0	Z_1
L	L	H	L	X_0	Y_1	Z_0
L	L	H	H	X_0	Y_1	Z_1
L	H	L	L	X_1	Y_0	Z_0
L	H	L	H	X_1	Y_0	Z_1
L	H	H	L	X_1	Y_1	Z_0
L	H	H	H	X_1	Y_1	Z_1
H	*	*	*	NONE	NONE	NONE

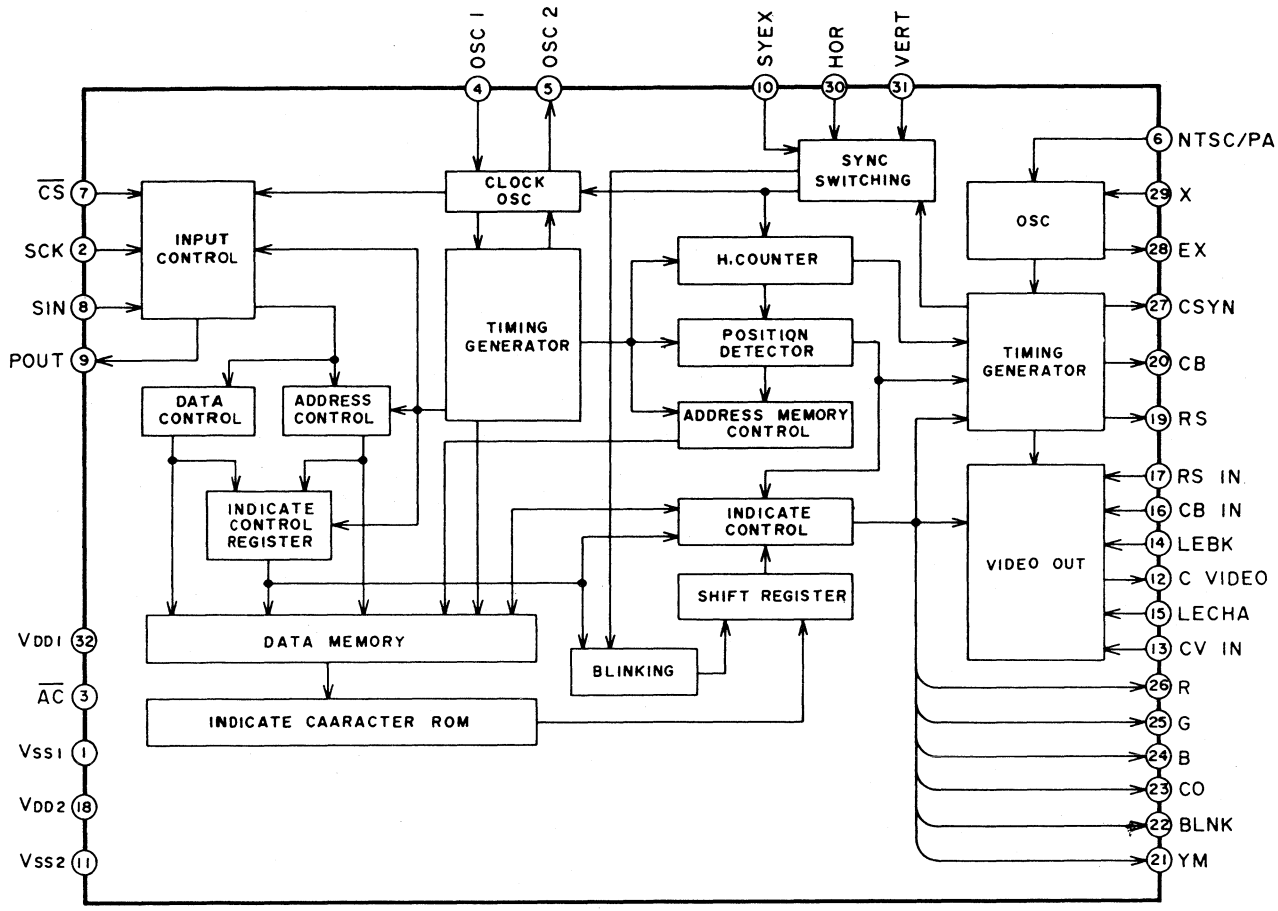
CXK1008L (NON VOLATILE RAM)



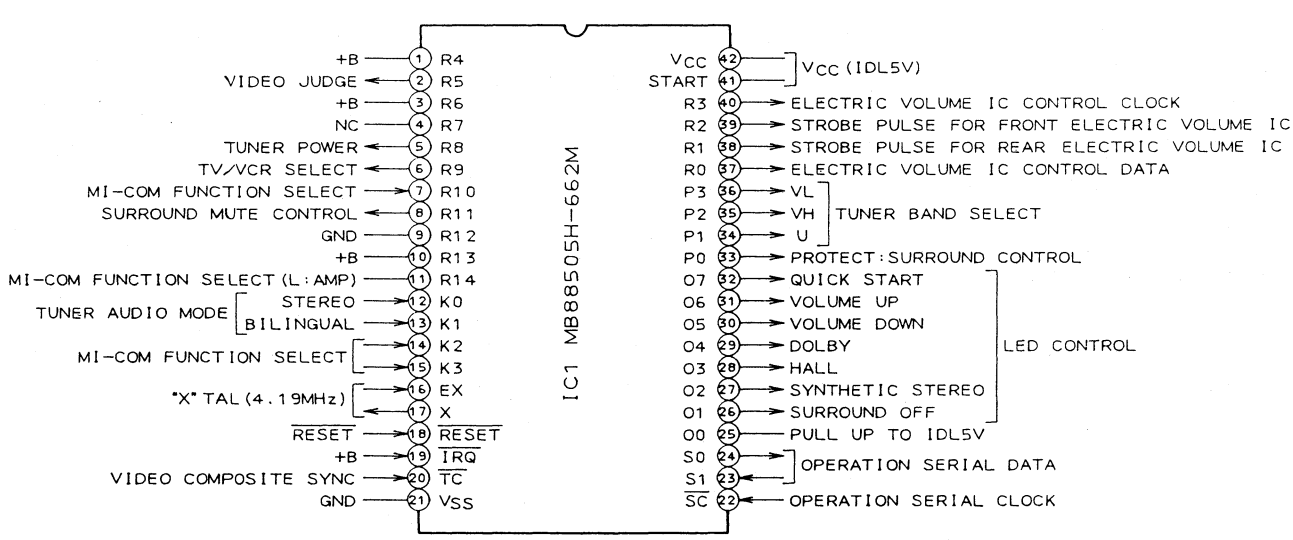
LH5164L-15 (8192WORD×8BIT CMOS STATIC RAM)

SYMBOL	PORT NAME
A0~A12	ADDRESS INPUTS
R/W	READ/WRITE INPUT
$\overline{OE}$	OUTPUT ENABLE INPUT
$\overline{CE}$	CHIP ENABLE INPUT
D0~D7	DATA IN/OUTPUT
V_{DD}	+5
GND	GROUND

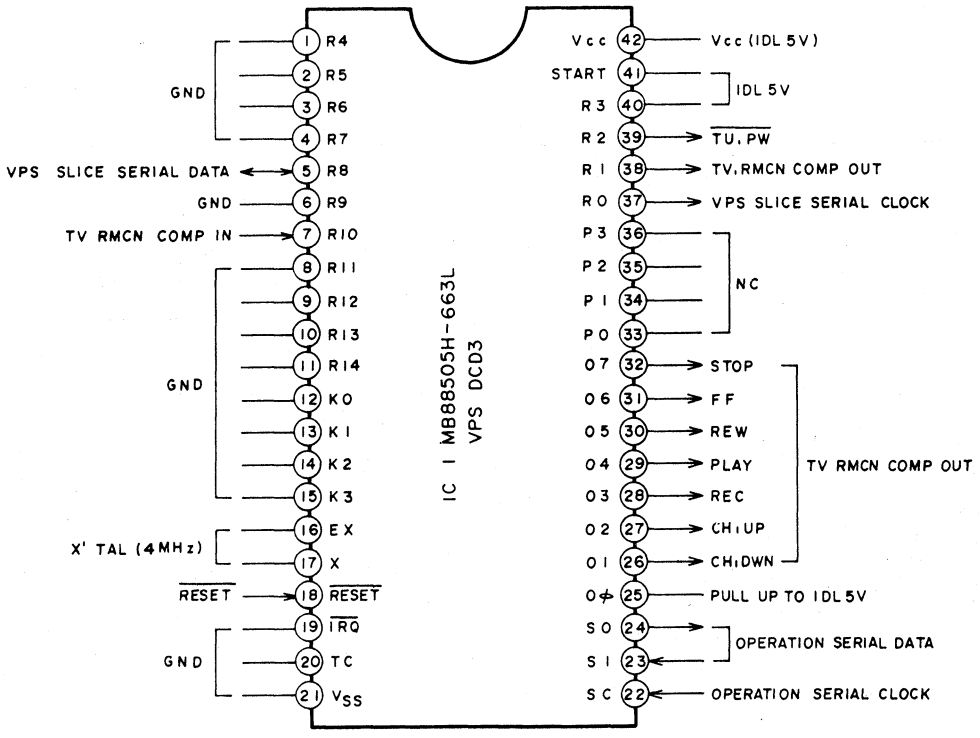
M50455-084SP (CHARACTOR GENERATOR)



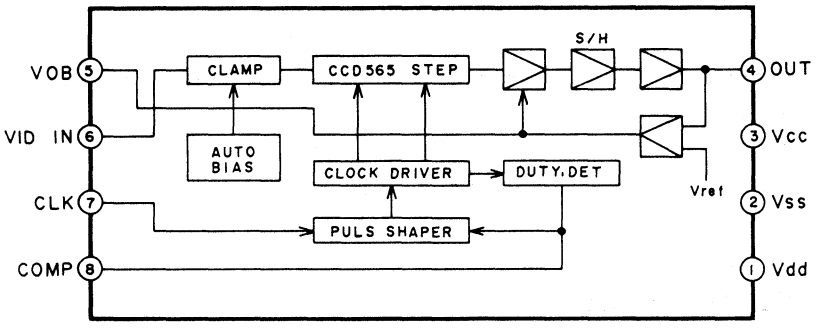
MB88505H-662H (AUDIO MI-COM)



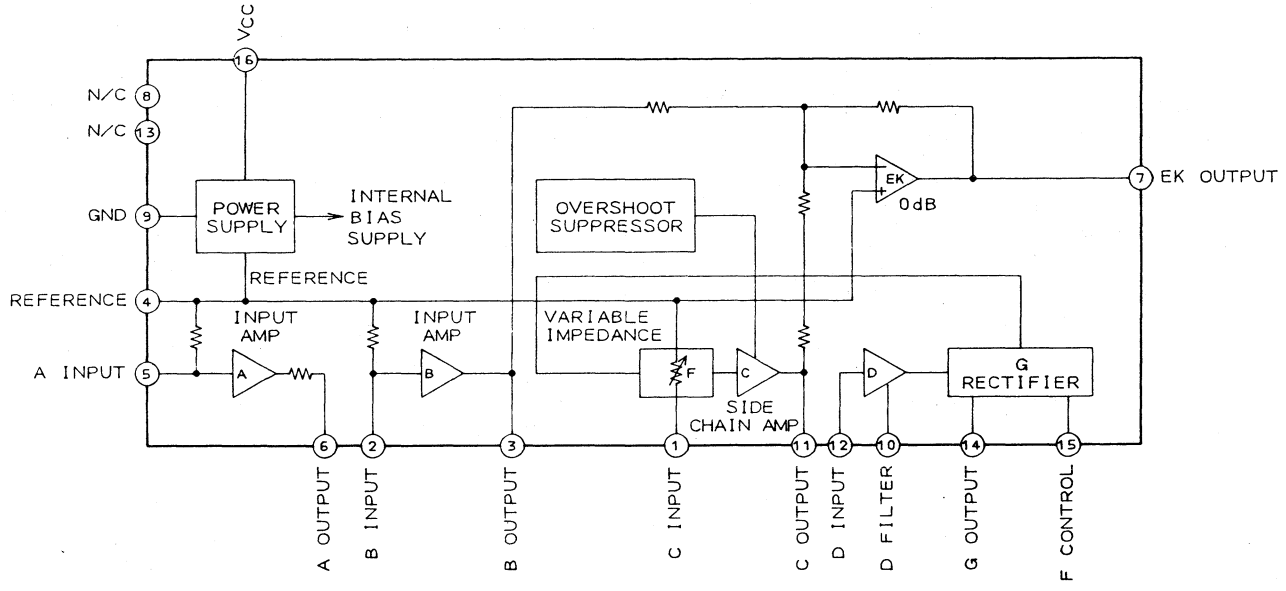
MB88505H-663L (VPS MI-COM)



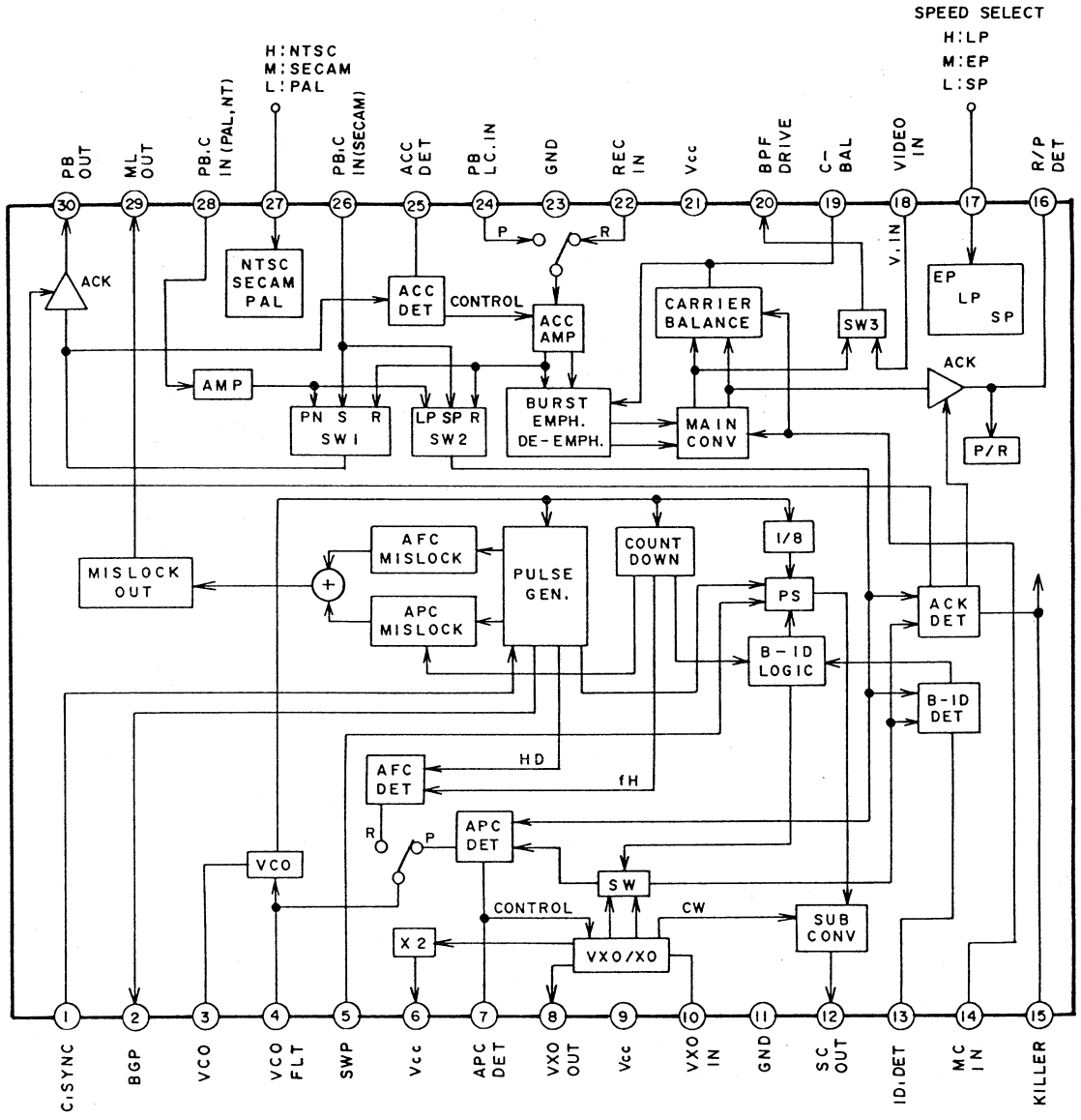
MSM6965-3RS (CCD)



NE645N (DOLBY NOISE REDUCTION)



TA8632 (VIDEO C-SIGNAL PROCESSING)

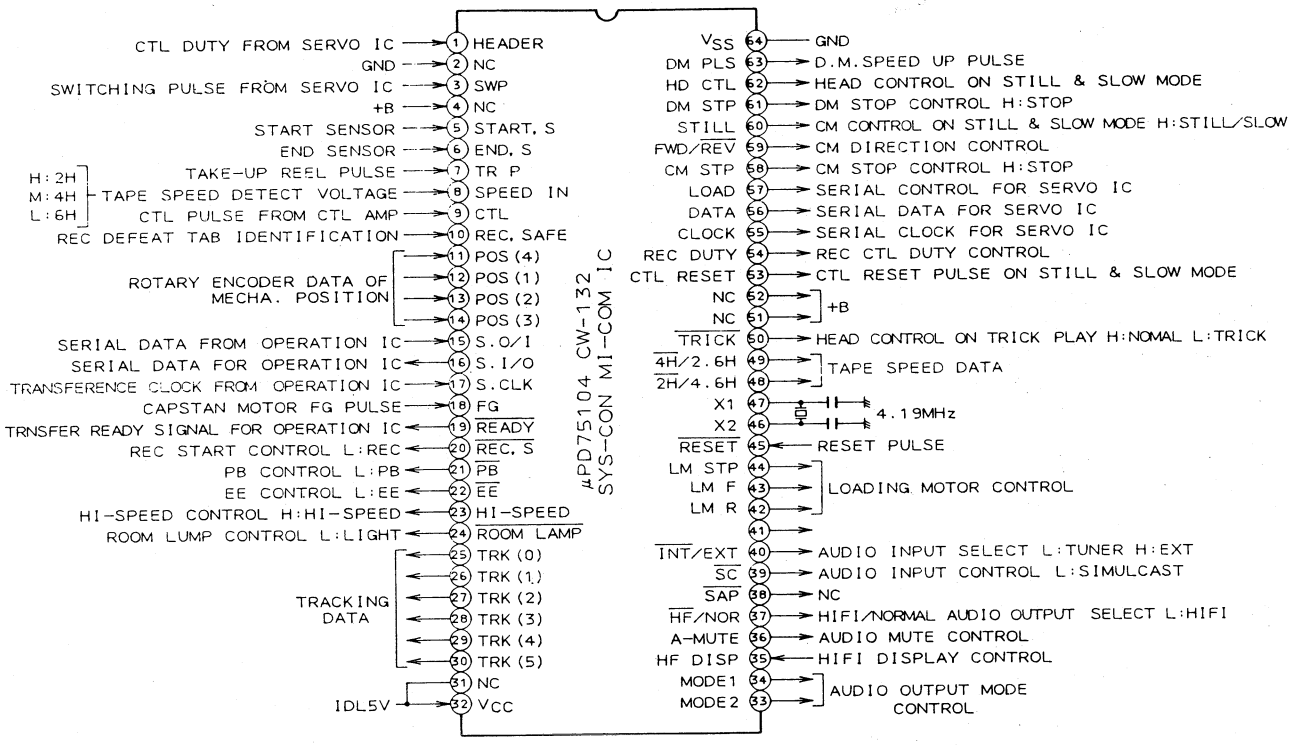


TC4528BF (DUAL MONO-MULTI)

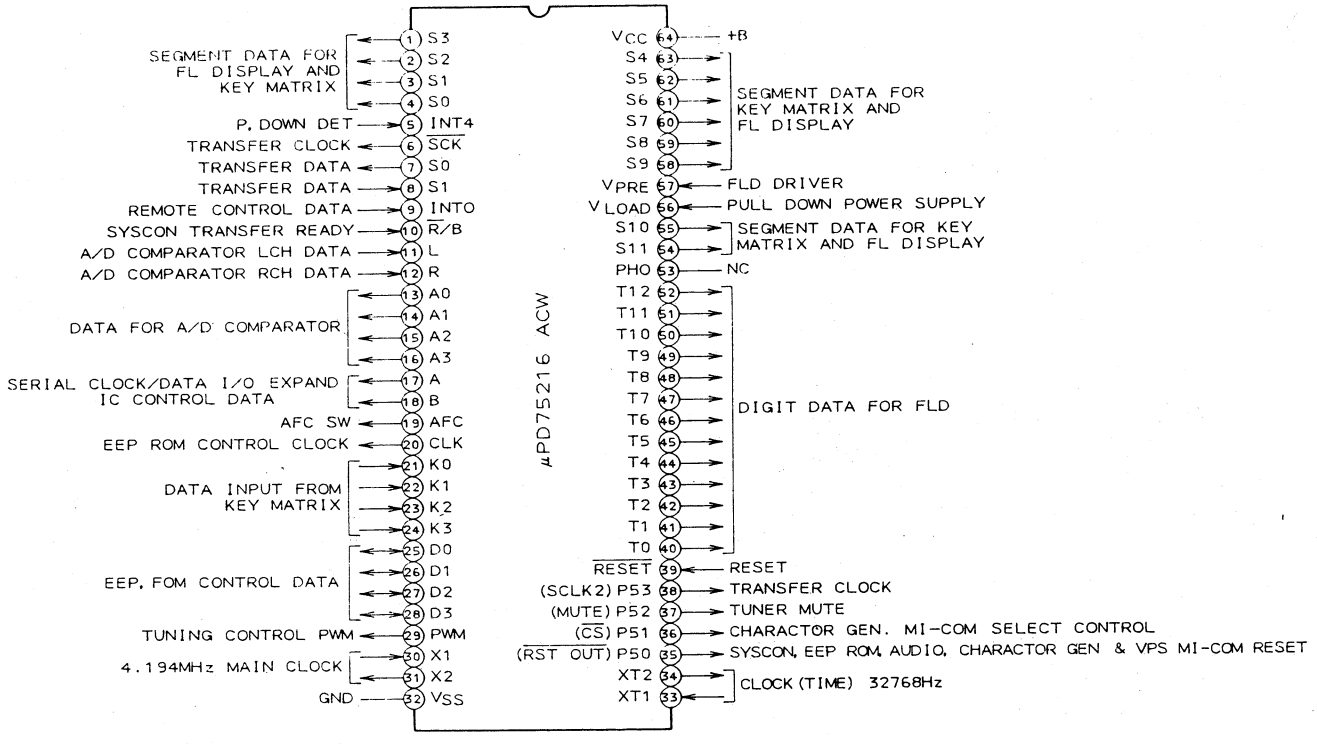
TRUTH TABLE

INPUT			OUTPUT		NOTE
A	B	CD	Q	$\bar{Q}$	
↓	H	H	⊓	⊔	OUTPUT PULSE
↓	L	H	L	H	INHIBIT
H	↓	H	L	H	INHIBIT
L	↓	H	⊓	⊔	OUTPUT PULSE
※	※	L	L	H	INHIBIT

μPD75104CW-132 (SYSTEM CONTROL MI-COM)



AUDIO OUTPUT MODE DATA

MODE-1	MODE-2	MODE
0	0	STEREO
1	1	LEFT
1	0	RIGHT

μPD75216ACW (OPERATION MI-COM)